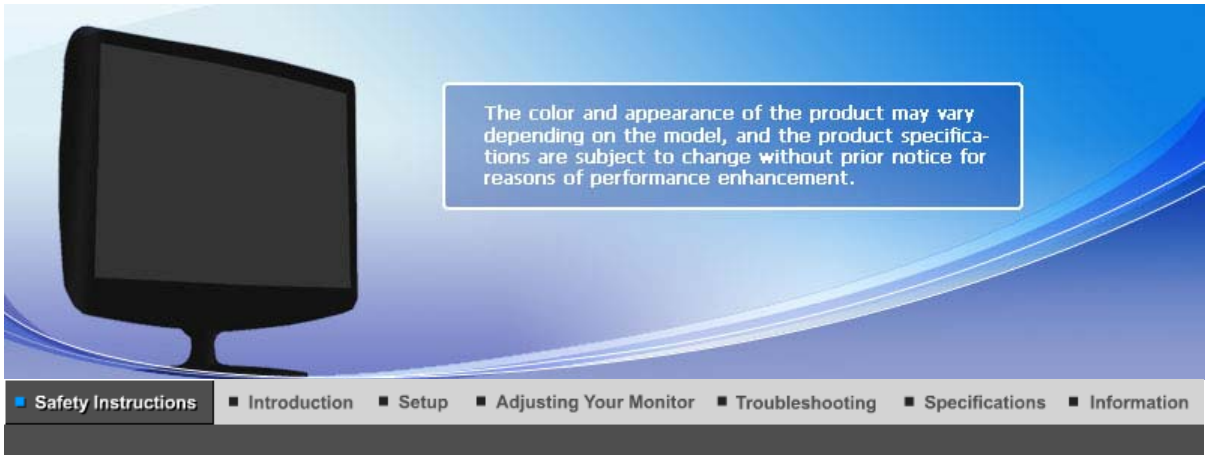
SyncMaster 932MW/2032MW

Install Driver

Windows


The color and appearance of the product may vary depending on the model, and the product specifications are subject to change without prior notice for reasons of performance enhancement.
Safety Instructions
Introduction
Setup
Adjusting Your Monitor
Troubleshooting
Specifications
Information

Notational

Please read the following safety instructions as they are designed to prevent damage to property and harm to the user.

Warning / Caution

Failure to follow directions noted by this symbol could result in bodily harm or damage to the equipment.

Notational Conventions

Prohibited

Important to read and understand at all times

Do not disassemble

Disconnect the plug from the outlet

Do not touch

Ground to prevent an electric shock

Power

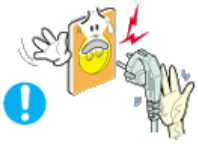
When not used for extended period of time, set your computer to DPMS.
If using a screen saver, set it to active screen mode.

The images here are for reference only, and are not applicable in all cases (or countries).

Shortcut to Anti-Afterimage Instructions

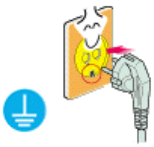
Do not use a damaged or loose plug.

- This may cause electric shock or fire.



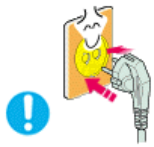
Do not pull the plug out by the wire nor touch the plug with wet hands.

- This may cause electric shock or fire.



Use only a properly grounded plug and receptacle.

- An improper ground may cause electric shock or equipment damage. (Class I Equipment only.)

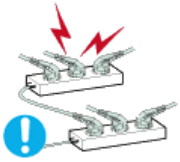


Insert the power plug firmly so that it does not come loose.

- A bad connection may cause fire.

Do not excessively bend the plug and wire nor place heavy objects upon them, which could cause damage.

- This may cause electric shock or fire.



Do not connect too many extension cords or plugs to one outlet.

- This may cause fire.

Do not disconnect the power cord while using the monitor.

- A surge may be caused by the separation and may damage the monitor.

Do not use the power cord when the connector or plug is dusty.

- If the connector or plug of the power cord is dusty, clean it with a dry cloth.
- Using the power cord with a dusty plug or connector may cause electric shock or fire.

To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

- This may cause electric shock or fire.

Installation

Be sure to contact an authorized Service Center, when installing your monitor in a location with heavy dust, high or low temperatures, high humidity, and exposed to chemical substances and where it operates for 24 hours such as at airports, train stations etc.

- Failure to do so may cause serious damage to your monitor.

Place your monitor in a location with low humidity and a minimum of dust.

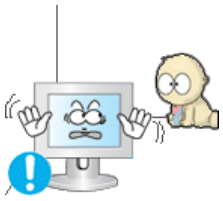
- Failure to do so may cause electric shock or fire inside the monitor.

Do not drop the monitor when moving it.

- This may cause damage to the product or the person carrying it.

Install the monitor base in a showcase or shelf so that the end of the base does not protrude from the showcase or shelf.

- Dropping the product may cause damage to the product or the person carrying it.



Do not place the product on the floor.

- Take care, as someone, specifically children may trip over it.

Do not place the product on an unstable or small surface area.

- Place the product on an even and stable surface, as the product may fall and cause harm to someone walking by, specifically children.

TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.

- Otherwise, this may cause fire.

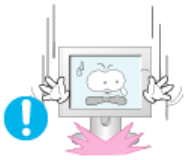
Keep any heating devices away from the power cable.

- A melted coating may cause electric shock or fire.

Do not install the product in places with poor ventilation, for instance, a

bookshelf, closet, etc.

- Any increase in the internal temperature may cause fire.



Put down the monitor carefully.

- Failing to do so may damage the monitor.

Do not place the monitor face down.

- This may damage the TFT-LCD surface.

The installation of the bracket must be done by a qualified professional.

- Installing the bracket by unqualified personnel may result in injury.
- Always use the mounting device specified in the owner's manual.

When installing the product, make sure to keep it away from the wall (more than 10 cm / 4 inches) for ventilation purposes.

- Poor ventilation may cause an increase in the internal temperature of the product, resulting in a shortened component life and degraded performance.

To prevent rainwater from running along the outdoor antenna cable and into the house, ensure that the outdoor portion of the cable is hanging below the point of entry.

- If the product is exposed to rainwater, it may cause electric shock or fire.

When using an outdoor antenna, ensure that there is sufficient distance between the antenna and any electric wires nearby so that they do not come into with each other if the antenna is knocked over by strong wind or any other accident.

- A knocked-over antenna may cause injury or electric shock.

Keep the plastic packaging (bag) out of children's reach.

- The plastic packaging (bag) may cause suffocation if children play with it.

Clean

When cleaning the monitor case or the surface of the TFT-LCD screen, wipe with a slightly moistened, soft fabric.

Do not spray water or detergent directly onto the monitor.

- This may cause damage, electric shock or fire.

Use the recommended detergent with a smooth cloth.

If the connector between the plug and the pin is dusty or dirty, clean it properly using a dry cloth.

- A dirty connector may cause electric shock or fire.

Make sure to unplug the power cord before cleaning the product.

- Otherwise, this may cause electric shock or fire.

Unplug the power cord from the power outlet and wipe the product using a soft, dry cloth.

- Do not use any chemicals such as wax, benzene, alcohol, thinners, insecticide, air freshener, lubricant or detergent.

Contact the SAMSUNG customer care center or Customer Center for interior cleaning once a year.

- Keep the product's interior clean. Dust which has accumulated in the interior over an extended period of time may cause a malfunction or fire.

Others

Do not remove the cover (or back).

- This may cause electric shock or fire.
- Refer to a qualified servicing company.

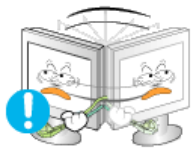
- **If your monitor does not operate normally - in particular, if there is any unusual sound or smell coming from the monitor - unplug it immediately and contact an authorized dealer or the Service Center.**
  - This may cause electric shock or fire.

- **Keep the product away from places exposed to oil, smoke or moisture; do not install inside a vehicle.**
  - This may cause a malfunction, electric shock or fire.
  - In particular, avoid operating the monitor near water or outdoors where the monitor could be exposed to snow or rain.

- **If the monitor is dropped or the casing is damaged, turn the monitor off and unplug the power cord. Then contact the Service Center.**
  - The monitor may malfunction, causing electric shock or fire.

- **Disconnect the plug from the outlet during storms or lightning or if it is not used for a long period of time.**
  - Failure to do so may cause electric shock or fire.

- **Do not try to move the monitor by pulling only the wire or the signal cable.**
  - This may cause a breakdown, electric shock or fire due to damage to the cable.



- **Do not move the monitor right or left by pulling only the wire or the signal cable.**
  - This may cause a breakdown, electric shock or fire due to damage to the cable.

- **Do not cover the vents on the monitor cabinet.**
  - Bad ventilation may cause a breakdown or fire.

- **Do not place water containers, chemical products or small metal objects on the monitor.**
  - This may cause a malfunction, electric shock or fire.
  - If a foreign substance enters the monitor, unplug the power cord and contact the Service Center .

- **Keep the product away from combustible chemical sprays or inflammable substances.**
  - This may cause an explosion or fire.

- **Never insert anything metallic into the monitor openings.**
  - This may cause electric shock, fire or injury.

- **Do not insert metal objects such as chopsticks, wire and tools or inflammable objects such as paper or matches into the vent, headphone port or AV ports or etc.**
  - This may cause electric shock or fire. If an alien substances or water enters the product, turn the product off, unplug the power connector from the wall outlet and contact the Service Center.

- **When viewing a fixed screen for an extended period of time, residual image or blurriness may appear.**
  - Change the mode to energy saving mode or set a screensaver to a changing picture when away from the monitor for an extended period of time.

- **Adjust the resolution and frequency to the level appropriate for the model.**
  - An inappropriate resolution may cause undesirable picture quality.

    19 inch Wide (48 cm) - 1440 x 900
    20 inch Wide (51 cm) - 1680 x 1050

- **Keep the volume at a comfortable level when using the headphones.**
  - Excessively loud volume level may damage hearing.

- **Viewing the monitor continuously at a too close angle may result in damage to your eyesight.**

- **To ease eye strain, take at least a five-minute break after every hour of using the monitor**.

- **Do not install the product on an unstable, uneven surface or a location prone to vibrations.**
  - Dropping the product may cause damage to the product or the person carrying it. Using the product in a location prone to vibrations may shorten the lifetime of the product or may cause the product to catch fire.

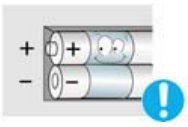
- **When moving the monitor, turn off and unplug the power cord. Make sure that all cables, including the antenna cable and cables connected to other devices, are disconnected before moving the monitor.**
  - Failure to disconnect cables may damage it and cause fire or electric shock.

- **Place the product out of children's reach, as they could damage by hanging onto it.**
  - A falling product may cause injury to the person or even fatality.

- **When not using the product for an extended period of time, keep the product unplugged.**
  - Otherwise, this may cause heat emission from the accumulated dirt or degraded insulation, causing electric shock or fire.

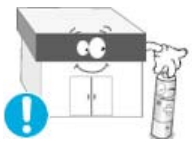
- **Do not place your children's favorite toys or any other objects of interest on the product.**
  - Children may try to climb on the product to retrieve an object. The product could fall, causing injury or even fatality.

- **When removing batteries from the remote control, ensure that the children do not swallow the batteries. Keep the batteries out of children's reach.**
  - If the batteries are swallowed, see a doctor immediately.



- **When replacing batteries, place the batteries in the correct +/- polarity position as indicated on the battery holder.**
  - The incorrect polarity may cause a battery to break or leak and may cause fire, injury, or contamination (damage).

- **Use only specified standard batteries. Do not use new and used batteries together.**
  - This may cause a battery to break or leak and may cause fire, injury, or contamination (damage).

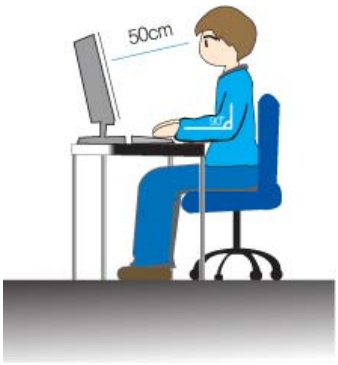


- **The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling purposes as the consumer.**
  - The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

- **When lifting up or moving the monitor, do not lift the monitor upside down while holding only the stand.**
  - This may cause your monitor to fall, and become damaged or cause personal injury.

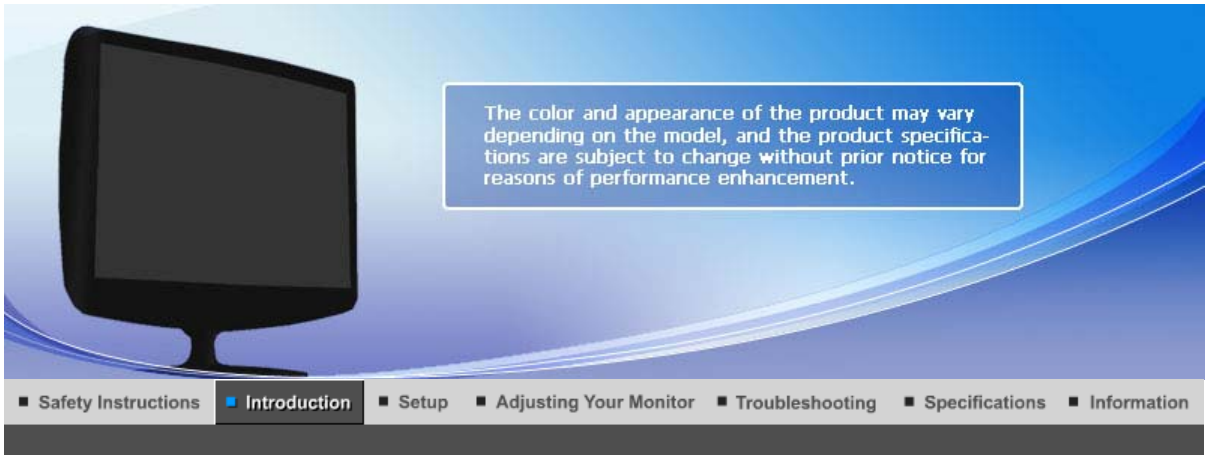
Good Postures When Using the Monitor

- Try to maintain a good posture when using the monitor.
  - Keep your back straight.
  - Keep a distance of about 45 ~ 50 cm between your eyes and the monitor screen. Look at the screen from slightly above it, and have the monitor directly in front of you.
  - Tilt the monitor upwards by 10 ~20 degrees. Adjust the monitor



height so that the top of the monitor is slightly below eye level.

- Adjust the monitor angle so that there is no reflected light on the screen.Try to maintain your arms perpendicular to your armpits.
- Keep your arms level with the back of your hands.
- Keep the angle of the elbow perpendicular.
- Keep the angle of the knees at more than 90 degree. Do not let your feet fall up from the floor. Adjust the arm position so that it is below the heart.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Please make sure the following items are included with your monitor.
If any items are missing, contact your dealer.
Contact a local dealer to buy optional items.

Unpacking

Without Stand

With Stand

Manual

Quick Setup Guide

Warranty Card
(Not available in all locations)

User's Guide, Monitor Driver

Cable

D-Sub Cable | Audio Cable | Power Cord

- Other

Remote Control

Batteries (AAA X 2)

Cleaning Cloth

- Sold separately

TV Antenna Cable (Coaxial Cable)

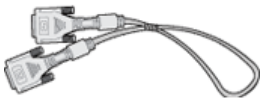
RCA Cable (Video-Yellow, Audio-Red and White)

Component(P_R, P_B, Y) Cable

S-VIDEO Cable

Earphones/Headphones

SCART Cable



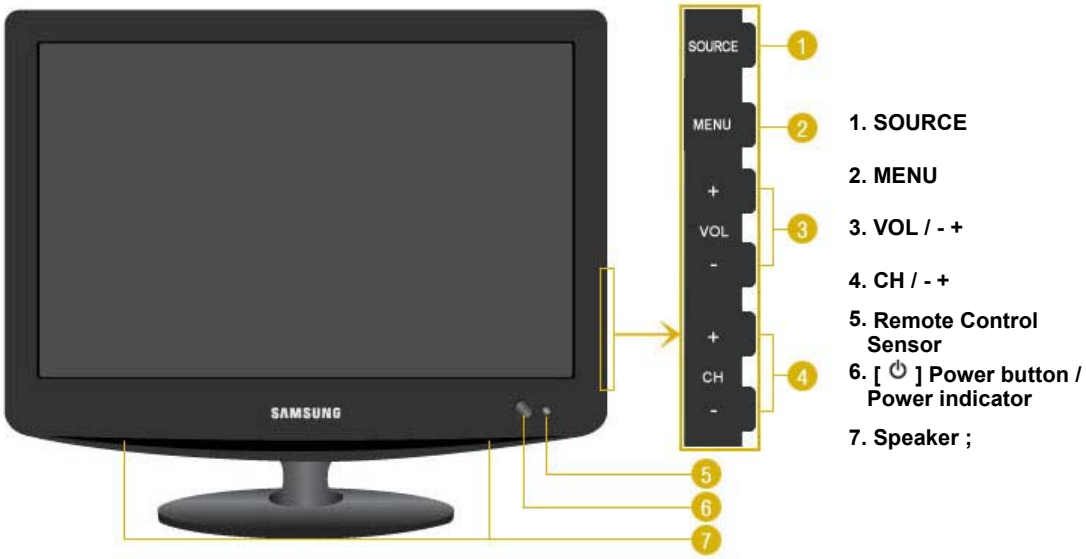
DVI Cable

DVI to HDMI cable

HDMI Cable

RCA to stereo (for PC) cable

Front



1. SOURCE
2. MENU
3. VOL / - +
4. CH / - +
5. Remote Control Sensor
6. [⏻] Power button / Power indicator
7. Speaker ;

1. **SOURCE**
   Activates a highlighted menu item.
   Press the SOURCE button to change the input signal source.
   Changing the source is allowed only in external devices that are connected to the monitor at the time.
   To switch Screen modes:
   [PC] → [DVI] → [TV] → [Ext.] → [AV] → [S-Video] → [Component] → [HDMI]
   >>Click here to see an animation clip
2. **MENU**
   Use this button for open the on-screen menu and exits from the menu screen or closes screen adjustment menu.
3. **VOL / - +**
   Moves from one menu item to another horizontally or adjusts selected menu values.
   Adjusts the audio volume.
4. **CH / - +**
   Moves from one menu item to another vertically or adjusts selected menu values.
   In TV mode, selects TV channels.
5. **Remote Control Sensor**
   Aim the remote control towards this spot on the monitor.
6. **[⏻] Power button / Power indicator**
   Turns the monitor On/Off.
   This will enable you to see the overall power status of the system. For more information, see the PowerSaver section.
7. **Speaker**
   You can hear sound by connecting the soundcard of your PC to the monitor.

See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your monitor OFF when it is not needed or when leaving it unattended for long periods.

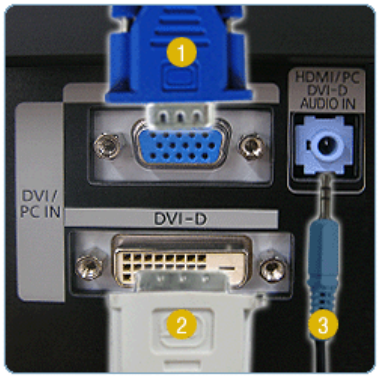
Rear

(The configuration at the back of the monitor may vary from product to product.)

1. POWER

- Power terminal
  Connect the power cord for your monitor to the POWER on the back of the monitor.
  This product may be used with 100 ~ 240VAC(+/- 10%).

2. DVI/PC IN / HDMI/PC/DVI-D AUDIO IN



1. **PC**
   : Connect the signal cable to the PC port on the back of your monitor.

2. **DVI-D**
   : Connect the DVI cable to the DVI-D port on the back of your monitor.

3. **HDMI/PC/DVI-D AUDIO IN**
   : Connect the HDMI/PC/DVI-D AUDIO IN terminal at the back of your monitor to your computer's sound card.

3. COMPONENT IN

1. **R - AUDIO - L**
   : Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the **R-AUDIO-L** port of the monitor.

2. **P_R, P_B,Y**
   : Connect the VIDEO OUT port of the DVD / DTV Set-Top Box to the P_R, P_B,Y input ports using a component cable (P_R, P_B,Y).

4. ANT IN

- Connect the CATV cable or TV antenna cable to the "ANT IN" port on the rear side of the monitor. Make sure to use a TV antenna cable (sold separately) as the antenna cable.

5. HDMI IN

- Connect the HDMI IN terminal at the back of your monitor to the HDMI terminal of your digital output device using a HDMI cable.

6. EXT(RGB)

- Connect the EXT (RGB) port of the monitor to the DVD Player using a SCART jack.

  As for EXT(RGB) port of the monitor, it makes TV or Video signal input and output.

7.

- The Kensington lock is a device used to physically fix the system when using it in a public place. (The locking device has to be purchased separately.)
  For using a locking device, contact where you purchase it.

8. S-VIDEO / VIDEO / R - AUDIO - L /

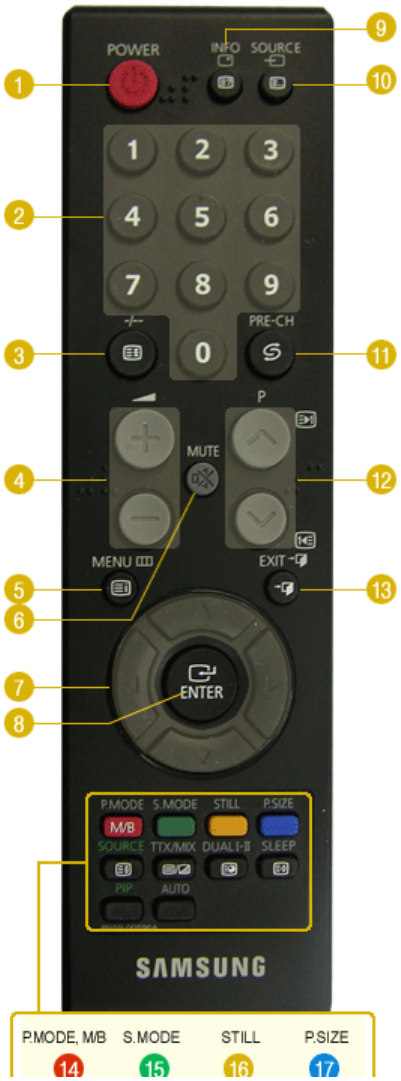
1. **S-VIDEO / VIDEO**
   : Input devices such as DVD, VCR or Camcorder are connected to the VIDEO or S-VIDEO terminal of the monitor using the Video or S-Video cable.
2. **R - AUDIO - L**
   : Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the **R-AUDIO-L** port of the monitor.
3.
   : Connect your headphones to the Headphone

connection terminal.

See Connecting the monitor for further information regarding cable connections.

Remote Control

The performance of the remote control may be affected by a TV or other electronic device operated near the monitor, causing malfunction due to interference with frequency.



1. POWER
2. Number button
3. -/--
4. – +
5. MENU
6. MUTE
7. ▲▼◀▶ Up-Down Left-Right buttons
8. ENTER
9. INFO
10. SOURCE
11. PRE-CH
12. P
13. EXIT
14. P.MODE, M/B (MagicBright™)
15. S.MODE
16. STILL
17. P.SIZE
18. SOURCE
19. TTX/MIX
20. DUAL I-II
21. SLEEP
22. PIP
23. AUTO

1. **POWER**
   Turns the monitor On/Off.

2. **Number button**
   Selects TV channels in the TV mode.
   Used to change channels when PIP is selected and the PIP SOURCE is set to TV.

3. **-/--**
   (One/Two-Digit channel selection)
   Use to select a channel numbered ten or over.
   Press this button, and the "--" symbol is displayed.
   Enter the two-digit channel number.

4. **– +**
   Adjusts the audio volume.

5. **MENU**
   Opens the on-screen menu and exits from the menu or closes the adjustment menu.

6. **MUTE**
   Press to mute the sound temporarily.
   Displayed on the bottom left of the screen.
   Press the MUTE button again to cancel the Mute function.
   Alternatively press the **– +** buttons to cancel the Mute function.

7. **▲▼◀▶ Up-Down Left-Right buttons**
   Moves from one menu item to another horizontally, vertically or adjusts selected menu values.

8. **ENTER**
   Activates a highlighted menu item.

9. **INFO**
   Current picture information is displayed on the upper left corner of the screen.

10. **SOURCE**
    Press the button to change the input signal SOURCE.
    Changing the SOURCE is only allowed for external devices that are connected to the monitor at the time.

11. **PRE-CH**
    This button is used to return to the immediately previous channel.

12. **P**
    In TV mode, selects TV channels.

13. **EXIT**
    Exits from the menu screen.

14. **P.MODE, M/B (MagicBright™)**
    Press to select a pre-defined Picture Mode of the monitor or to change the picture atmosphere as required.
    When you press this button, current mode is displayed on the lower center of the screen.

    TV / AV / Ext. / S-Video / Component / HDMI : P.MODE
    The monitor has four automatic picture settings that are preset at the factory.
    Then press the button again to circle through available preconfigured modes.
    (Dynamic → Standard → Movie → Custom)

    PC / DVI Mode : M/B (MagicBright™)
    MagicBright™ is a new feature providing the optimum viewing environment depending on the contents of the image you are watching.
    Then press the button again to circle through available preconfigured modes.
    (Entertain→ Internet → Text → Custom)

15. **S.MODE (Sound Mode)**
    When you press this button, current mode is displayed on the lower center of the screen.
    The monitor has a built-in high fidelity stereo amplifier.
    Then press the button again to circle through available preconfigured modes.
    (Standard → Music → Movie → Speech → Custom)

16. **STILL - Operates only for the CVBS, S-Video and RF Signal SOURCEs.**
    Press the button once to freeze the screen. Press it again to unfreeze.

17. **P.SIZE**

    Press to change the screen size.

- PC/ DVI mode : Wide / 4:3
- TV / Ext. / AV / S-Video mode : Auto Wide / Wide / 16:9 / Zoom1 / Zoom2 / 4:3
- Component / HDMI mode : Wide / 16:9 / Zoom1 / Zoom2 / 4:3

18. SOURCE - Adjustable when the PIP function is ON.
Selects the Video SOURCE.

19. TTX/MIX
TV channels provide written information services via teletext.

- Teletext buttons

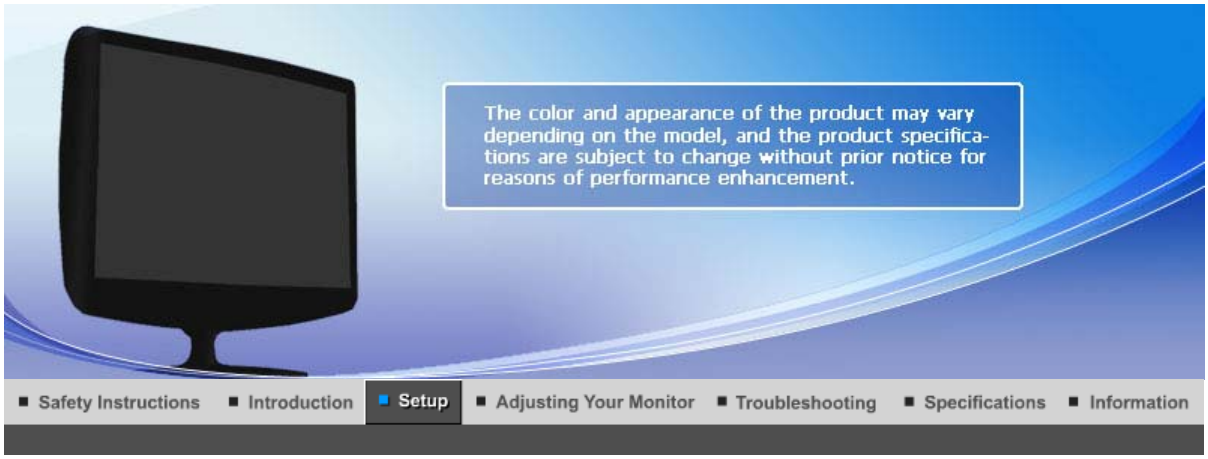
For more information > TTX / MIX

20. DUAL I-II
STEREO/MONO, DUAL I / DUAL II and MONO/NICAM MONO/NICAM STEREO can be operated depending on broadcasting type by using DUAL button on the remote control while watching TV.

21. SLEEP
Turns the monitor off after a pre-determined period of time.

22. PIP - Available in PC/DVI Mode
Push the PIP button to turn PIP screen On/Off.

23. AUTO - Available In PC mode Only
Adjusts the screen display automatically.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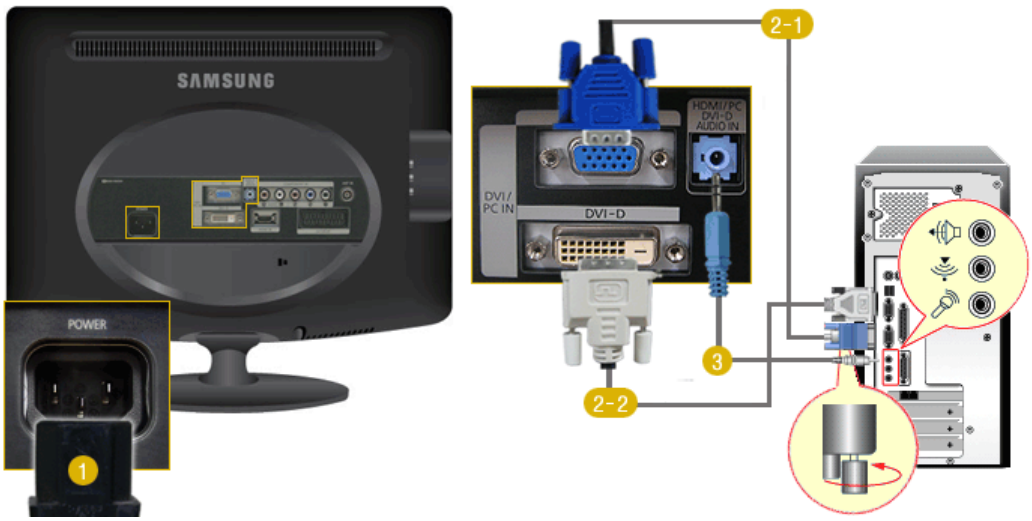
Connecting the monitor

1.Connecting to a Computer



1. Connect the power cord for your monitor to the POWER on the back of the monitor.
   Plug the power cord for the monitor into a nearby outlet.
2. Use appropriate connection for your computer.
   2-1. Using the D-sub (Analog) connector on the video card.
   Connect the signal cable to the **PC** port on the back of your monitor.
   [PC]
   2-2. Using the DVI (Digital) connector on the video card.
   Connect the DVI cable to the **DVI-D** port on the back of your monitor.
   [DVI-D]
3. Connect the **HDMI / PC / DVI-D AUDIO IN** port on the rear side of the monitor to the sound card of the PC.
4. Turn on both your computer and the monitor.

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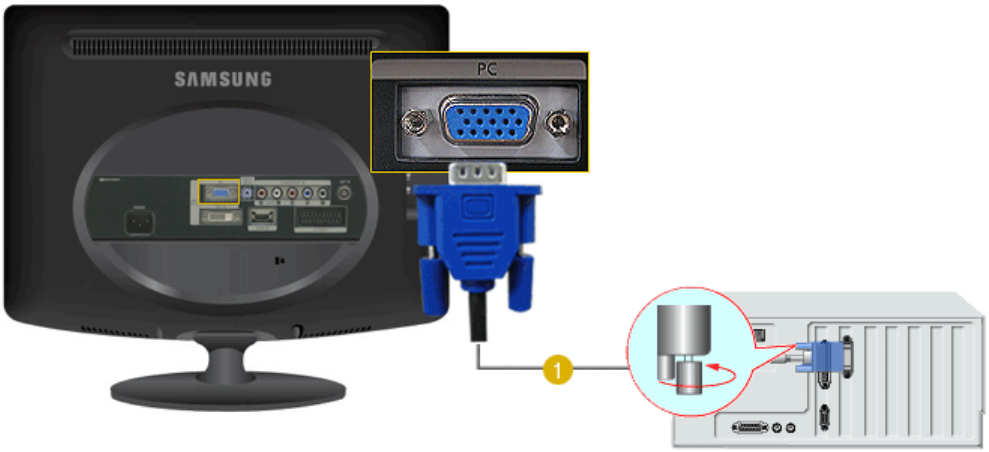
2. Connecting to a Macintosh



1. Using the D-sub (Analog) connector on the video card.
   Connect the signal cable to the D-SUB port on the Macintosh computer.
   [PC]
2. Turn on the monitor and Macintosh.

Connecting to Other devices

This monitor allows the user to connect it to such input devices as a DVD player, a VCR or camcorder, or a DTV or TV without disconnecting the PC.
The configuration at the back of the monitor may vary from product to product.

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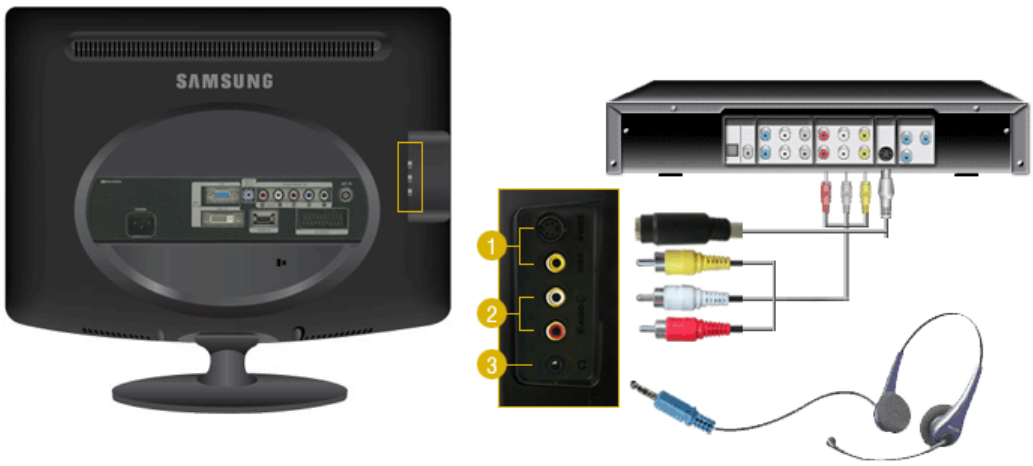
1. Connecting AV Devices / Connecting Headphone

The monitor has AV connection terminals to connect AV input devices like DVDs, VCRs or Camcorders. You may enjoy AV signals as long as the monitor is turned on.

You may connect your headphones to the monitor.



1. Input devices such as DVD, VCR or Camcorder are connected to the VIDEO or S-VIDEO terminal of the monitor using the Video or S-Video cable.
2. Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the **R-AUDIO-L** port of the monitor.
3. Connect your headphones to the Headphone connection terminal.
4. Then, start the DVD, VCR or Camcorders with a DVD disc or tape inserted.

5. Select AV or S-Video using the **SOURCE**.

---

2. Connecting EXT.(RGB) - It only applies to AV DEVICE that supports SCART.

Connect to the DVD Devices input if the device has a EXT (RGB) jack.
You can watch DVD simply by hooking up the DVD player with the monitor as long as the power is on.

1. Connect the **EXT (RGB)** port of the monitor to the DVD Player using a SCART jack.
2. Select Ext. by using the **SOURCE**.

---

3. Connecting TV

You may view television programs on the monitor if it is connected to an antenna or CATV cable without installing any separate TV reception hardware or software on your computer.

1. Connect the CATV cable or TV antenna cable to the "ANT IN" port on the rear side of the monitor.
   Make sure to use a TV antenna cable (sold separately) as the antenna cable.

   - **When using an interior antenna terminal:**
     Check the antenna terminal on the wall first and connect the antenna cable.
   - **When using an outdoor antenna:**
     If you are using an outdoor antenna, use a professional it for installation if possible.
   - **To connect the RF cable to the antenna input terminal:**
     Keep the copper wire portion of the RF cable straight.

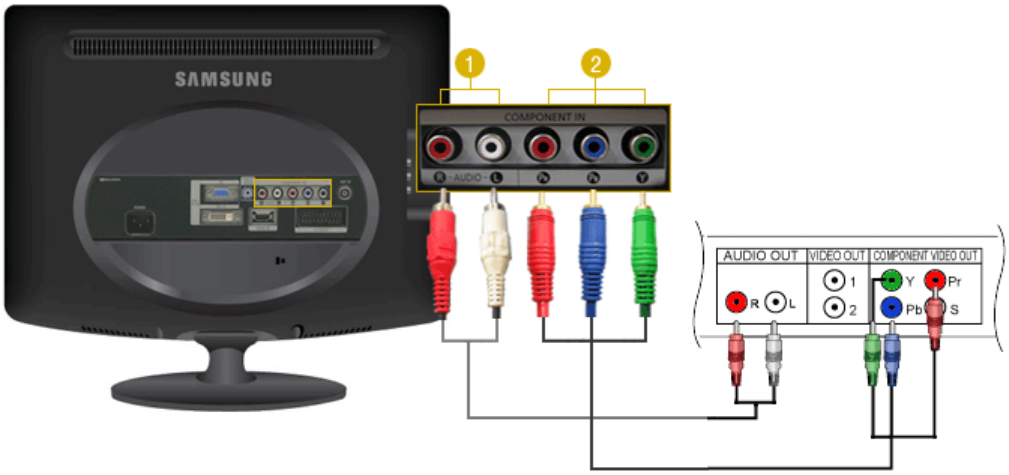
2. Turn on the monitor.

3. Select TV using the **SOURCE**.
4. Select a desired TV channel.

Is weak signal causing poor reception?
Purchase and install a signal amplifier for better reception.

4. Connecting DVD/DTV Set Top Box

Connect to the DVD/DTVSet Top Box input if the device has a DVD/DTV connector.
You can watch Component simply by hooking up the Component with the monitor as long as the power is on.



1. Connect the port of the DVD, VCR (DVD / DTV Set-Top Box) to the **R-AUDIO-L** port of the monitor.
2. Connect the VIDEO OUT port of the DVD / DTV Set-Top Box to the P_R, P_B,Y input ports using a component video cable (P_R, P_B,Y).
3. Select Component using the **SOURCE**.

5. Connecting HDMI

You cannot connect a PC to the **HDMI IN** terminal.

1. Input devices such as digital DVD are connected to the **HDMI IN** terminal of the monitor using the HDMI cable.

2. Then, start the DVD with a DVD disc inserted.
3. Select HDMI using the **SOURCE** button.

---

6. Connecting Using a DVI to HDMI Cable

1. Connect the DVI output terminal of a digital output device to the **HDMI IN** terminal of the monitor using a DVI to HDMI cable.
2. Connect the red and white jacks of an RCA to stereo (for PC) cable to the same colored audio output terminals of the digital output device, and connect the opposite jack to the **HDMI / PC / DVI-D AUDIO IN** terminal of the monitor.
3. Then, start the DVD with a DVD disc inserted.
4. Select HDMI using the **SOURCE** button.

Using the Stand

1. Folding the base

You can tilt the monitor upwards at an angle of 0° to18°

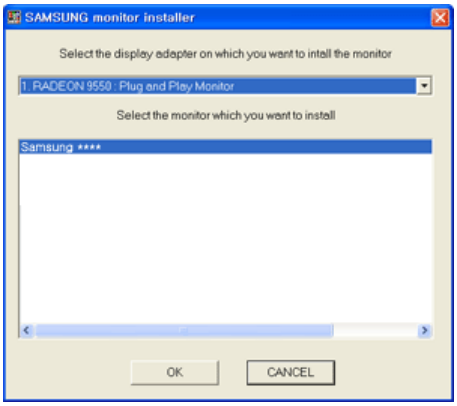
Installing the monitor driver (Automatic)

When prompted by the operating system for the monitor driver, insert the CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions appropriate for the operating system you have.

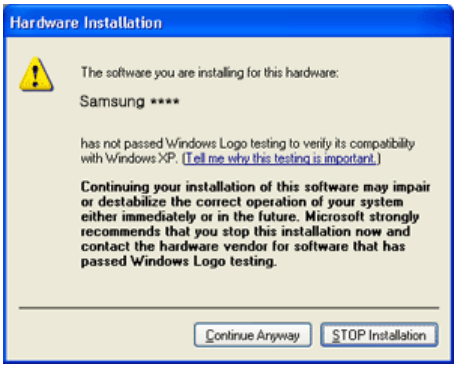
Prepare a blank disk and download the driver program file at the Internet web site shown here.

- Internet web site : http://www.samsung.com/ (WorldWide)
  http://www.samsung.com/monitor (U.S.A)
  http://www.sec.co.kr/monitor (Korea)
  http://www.samsungmonitor.com.cn/ (China)

1. Insert CD into the CD-ROM drive.
2. Click "**Windows**"
3. Choose your monitor model in the model list, then click the **"OK"** button.


SAMSUNG monitor installer
Select the display adapter on which you want to intall the monitor
1. RADEON 9550 : Plug and Play Monitor
Select the monitor which you want to install
Samsung ****
OK
CANCEL

4. If you can see following message window, then click the **"Continue Anyway"** button. Then click **"OK"** button. (Microsoft® Windows® XP Operating System)


Hardware Installation
The software you are installing for this hardware:
Samsung ****
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

This monitor driver is under certifying MS logo,and this installation don't damage your system.The certified driver will be posted on Samsung Monitor Homepage.
http://www.samsung.com/

5. Monitor driver installation is completed.

Installing the monitor driver (Manual)

When prompted by the operating system for the monitor driver, insert the CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions appropriate for the operating system you have.

Prepare a blank disk and download the driver program file at the Internet web site shown below.

- Internet web site : http://www.samsung.com/ (Worldwide)
  http://www.samsung.com/monitor (U.S.A)
  http://www.sec.co.kr/monitor (Korea)
  http://www.samsungmonitor.com.cn/ (China)

Microsoft® Windows Vista™ Operating System

1. Insert your Manual CD into your CD-ROM drive.
2. Click (Start) and "**Control Panel**". Then, double-click on "**Appearance and Personalization**".

3. Click "**Personalization**" and then "**Display Settings**".

4. Click "**Advanced Settings…**".

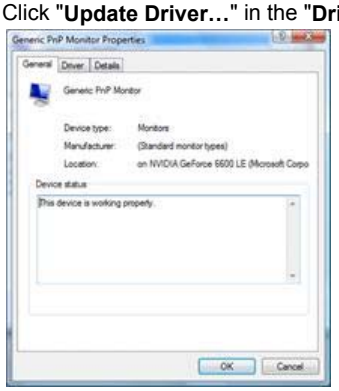
5. Click "**Properties**" in the "**Monitor**" tab. If the "**Properties**" button is deactivated, it means the configuration for your monitor is completed. The monitor can be used as is.
   If the message "**Windows needs…**" is displayed, as shown in the figure below, click "**Continue**".

Generic PnP Monitor and NVIDIA GeForce 6600 LE (Microsoft Co...
Adapter
Monitor
Troubleshoot
Color Management
Monitor Type
Generic PnP Monitor
Properties
Monitor Settings
Screen refresh rate:
60 Hertz
Hide modes that this monitor cannot display
Clearing this check box allows you to select display modes that this monitor cannot display correctly. This may lead to an unusable display and/or damaged hardware.
OK
Cancel
Apply

This monitor driver is under certifying MS logo, and this installation doesn't damage your system.
The certified driver will be posted on Samsung Monitor homepage.

http://www.samsung.com/

6. Click "**Update Driver…**" in the "**Driver**" tab.

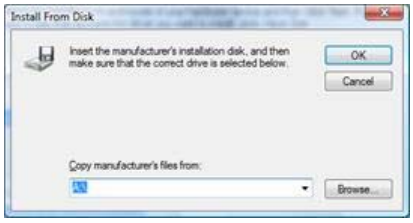


7. Check the "**Browse my computer for driver software**" checkbox and click "**Let me pick from a list of device drivers on my computer**".

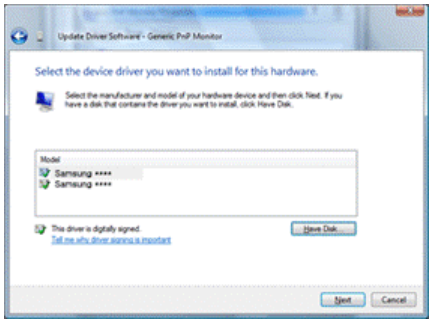
How do you want to search for driver software?
Search automatically for updated driver software
Browse my computer for driver software
Locate and install driver software manually.
Cancel

Browse for driver software on your computer
Search for driver software in this location:
Browse...
Include subfolders
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Next
Cancel

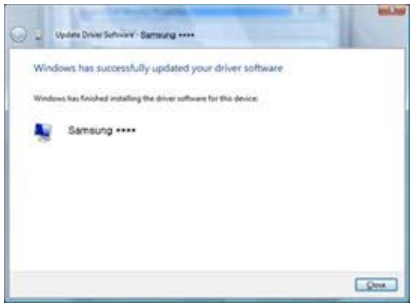
8. Click "**Have Disk…**" and select the folder (for example, D:\Drive) where the driver setup file is located, and click "**OK**".

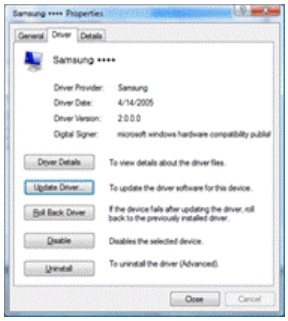

Install From Disk
Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.
OK
Cancel
Copy manufacturer's files from:
Browse...

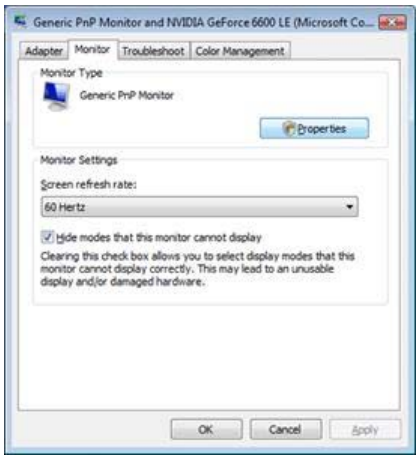
9. Select the model that matches your monitor from the list of monitor models on the screen, and click "**Next**".

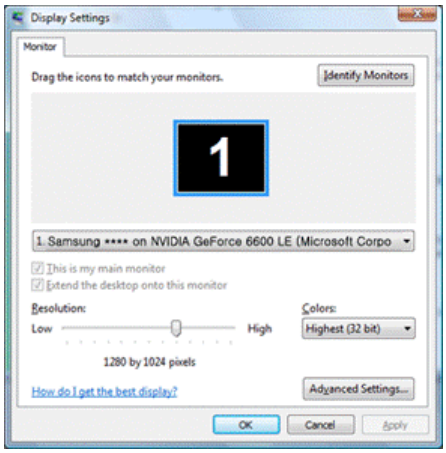

Update Driver Software - Generic PnP Monitor
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Model
Samsung ****
Samsung ****
This driver is digitally signed.
Tell me why driver signing is important
Have Disk...
Next
Cancel

10. Click "**Close**"→ "**Close**" → "**OK**" → "**OK**" on the following screens displayed in sequence.


Update Driver Software - Samsung ****
Windows has successfully updated your driver software
Windows has finished installing the driver software for this device:
Samsung ****
Close

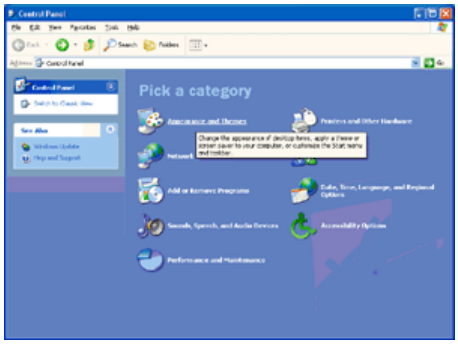



Generic PnP Monitor and NVIDIA GeForce 6600 LE (Microsoft Co...
Adapter
Monitor
Troubleshoot
Color Management
Monitor Type
Generic PnP Monitor
Properties
Monitor Settings
Screen refresh rate:
60 Hertz
Hide modes that this monitor cannot display
Clearing this check box allows you to select display modes that this monitor cannot display correctly. This may lead to an unusable display and/or damaged hardware.
OK
Cancel
Apply

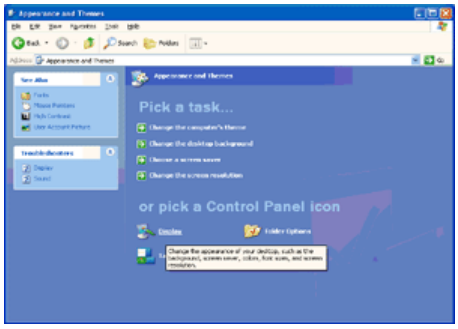


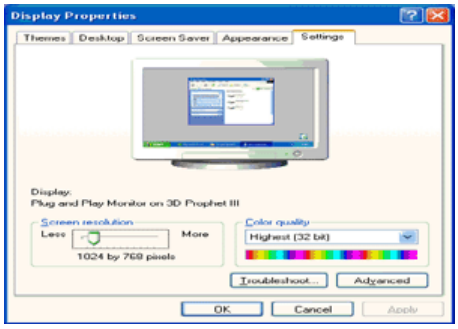
Microsoft® Windows® XP Operating System

1. Insert CD into the CD-ROM driver.
2. Click "**Start**" → "**Control Panel**" then click the "**Appearance and Themes**" Icon.

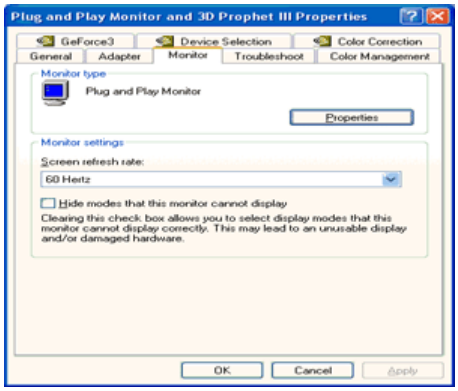


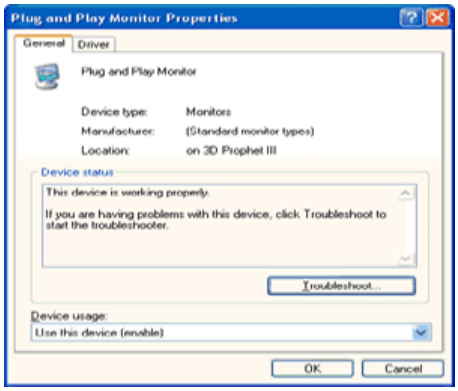
3. Click "**Display**" icon and choose the "**Settings**" tab then click "**Advanced..**".



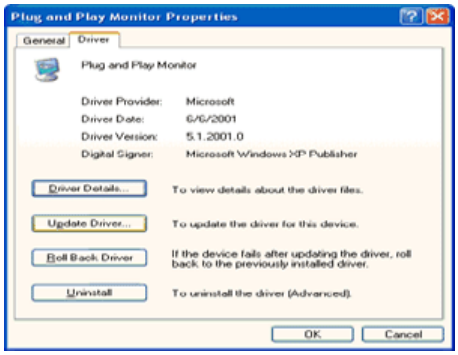


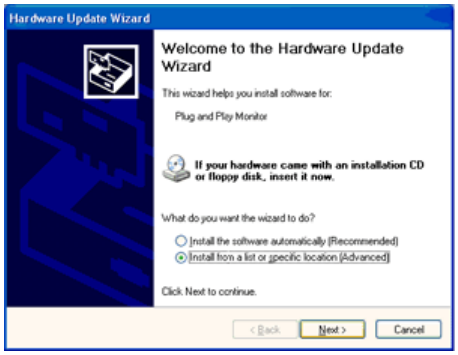
4. Click the "**Properties**" button on the "**Monitor**" tab and select "**Driver**" tab.



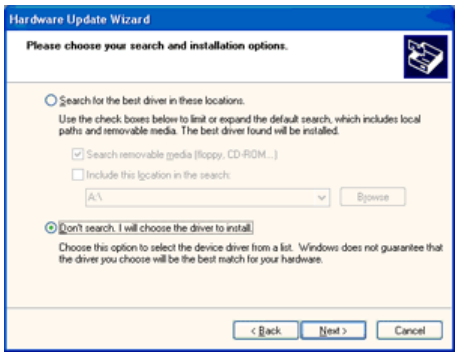
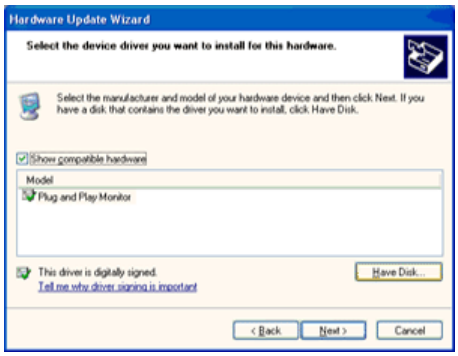


5. Click "**Update Driver..**" and select "**Install from a list or..**" then click "**Next**" button.

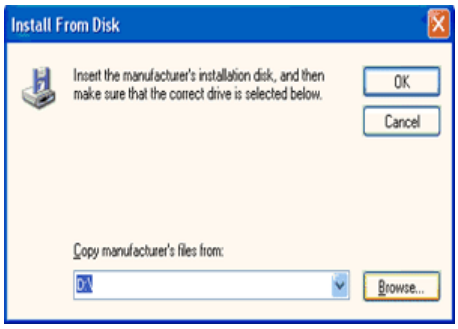


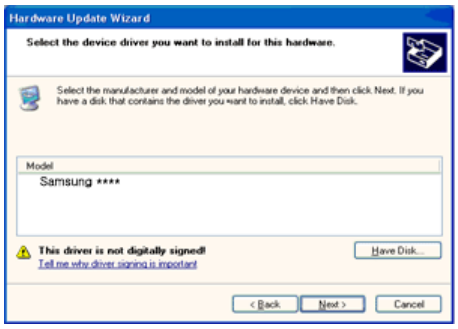

Hardware Update Wizard
Welcome to the Hardware Update Wizard
This wizard helps you install software for:
Plug and Play Monitor
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

6. Select "**Don't search ,I will..**" then click "**Next**" and then click "**Have disk**".

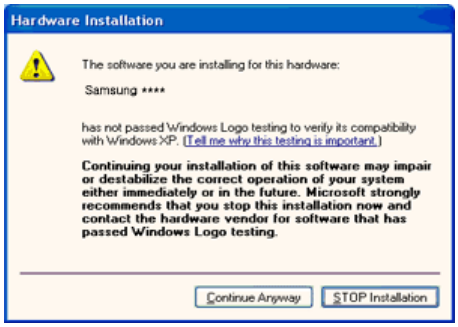

Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
A:\
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

Hardware Update Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
Model
Plug and Play Monitor
This driver is digitally signed.
Tell me why driver signing is important
Have Disk...
< Back
Next >
Cancel

7. Click the "**Browse**" button then choose A:(D:\Driver) and choose your monitor model in the model list and click the "**Next**" button.



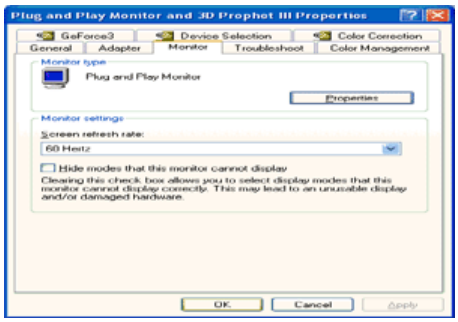

Hardware Update Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Model
Samsung ****
This driver is not digitally signed!
Tell me why driver signing is important
Have Disk...
< Back
Next >
Cancel

8. If you can see following message window, then click the "**Continue Anyway**" button. Then click "**OK**" button.


Hardware Installation
The software you are installing for this hardware:
Samsung ****
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

This monitor driver is under certified MS logo,and this installation doesn't damage your system.The certified driver will be posted on Samsung Monitor Homepage.
http://www.samsung.com/

9. Click the "**Close**" button then click "**OK**" button continually.



10. Monitor driver installation is completed.

Microsoft® Windows® 2000 Operating System

When you can see "Digital Signature Not Found" on your monitor, follow these steps.

1. Choose "**OK**" button on the "**Insert disk**" window.
2. Click the "**Browse**" button on the "**File Needed**" window.
3. Choose A:(D:\Driver) then click the "Open" button and then click "**OK**" button.

How to install

1. Click "**Start**" , "**Setting**" , "**Control Panel**".
2. Double click the "**Display**" Icon.
3. Choose the "**Settings**" tab and then click "**Advanced..**".
4. Choose "**Monitor**".
   Case1: If the "Properties" button is inactive, it means your monitor is properly configured. Please stop installation
   Case2: If the "Properties" button is active, click the "Properties" button then follow next steps continually.
5. Click "**Driver**" and then click on "**Update Driver..**" then click on the "Next" button.
6. Choose "**Display a list of the known drivers for this device so that I can choose a specific driver**" then click "**Next**" and then click "**Have disk**".
7. Click the "**Browse**" button then choose A:(D:\Driver).
8. Click the "**Open**" button, then click "**OK**" button.
9. Choose your monitor model and click the "**Next**" button then click "**Next**" button.
10. Click the "**Finish**" button then the "**Close**" button.

    If you can see the "**Digital Signature Not Found**" window then click the "**Yes**"button. And click the "**Finish**" button then the "**Close**" button.

Microsoft® Windows® Millennium Operating System

1. Click "**Start**" , "**Setting**" , "**Control Panel**".
2. Double click "**Display**" icon.
3. Select the "**Settings**" tab and click "**Advanced Properties**" button.
4. Select the "**Monitor**" tab.
5. Click the "**Change**" button in the "**Monitor Type**" area.
6. Choose "**Specify the location of the driver**".
7. Choose "**Display a list of all the driver in a specific location..**" then click "**Next**" button.
8. Click the "**Have Disk**" button
9. Specify A:\(D:\driver) then click "**OK**" button.
10. Select "**Show all devices**" and choose the monitor that corresponds to the one you connected to your computer and click "**OK**".
11. Continue choosing "**Close**" button and "**OK**" button until you close the Display Properties dialogue box.

Microsoft® Windows® NT Operating System

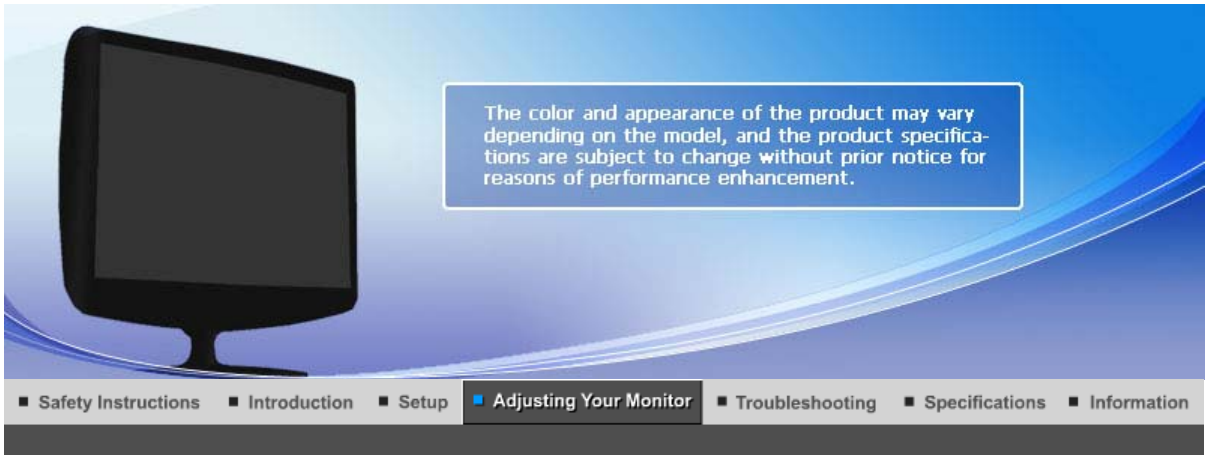
1. Click **Start**, **Settings**, **Control Panel**, and then double-click **Display** icon.
2. In Display Registration Information window, click Settings Tab and then click **All Display Modes**.
3. Select a mode that you wish to use (Resolution, Number of colors and Vertical frequency) and then click **OK**.
4. Click **Apply** button if you see the screen working normally after clicking **Test**. If the screen is not normal, change to a different mode (lower mode of resolution, colors or frequency).

If there is no Mode at **All Display Modes**, select the level of resolution and vertical frequency by referring to the Preset Timing Modes in the user guide.

Linux Operating System

To execute X-Window, you need to make the X86Config file, which is a type of system setting file.

1. Press Enter at the first and the second screen after executing the X86Config file.
2. The third screen is for **setting your mouse**.
3. Set a mouse for your computer.
4. The next screen is for **selecting a keyboard**.
5. Set a Keyboard for your computer.
6. The next screen is for **setting your monitor**.
7. First of all, set a **horizontal frequency** for your monitor. (You can enter the frequency directly.)
8. Set a **vertical frequency** for your monitor. (You can enter the frequency directly.)
9. Enter the **model name of your monitor**. This information will not affect the actual execution of X-Window.
10. You have **finished** setting up your monitor.
    Execute X-Window after setting other requested hardware.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Safety Instructions
Introduction
Setup
Adjusting Your Monitor
Troubleshooting
Specifications
Information

Input

Available Mode P : PC / DVI T : TV E : Ext. A : AV S : S-Video C : Component H : HDMI

The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Source List	Use to select PC, TV, or other external input SOURCEs connected to the Monitor. Use to select the screen of your choice. **The direct button on the remote control is the 'SOURCE' button.** **1) PC** **2) DVI** **3) TV** **4) Ext.** **5) AV** **6) S-Video** **7) Component** **8) HDMI**	
PIP	When external AV devices such as VCRs or DVDs are connected to the monitor, PIP allows you to watch video from those devices in a small window super-imposed on the PC Video signal. (Off / On) **- Available in PC / DVI Mode Only**	

	1) PIP : Turn the PIP Screen on or off. **The direct button on the remote control is 'PIP' button.** **Off / On** **2) Source** : Select the input SOURCE for the PIP. **The direct button on the remote control is 'SOURCE' button.** **PC / DVI** : TV / AV / S-Video **3) Size** : Change the Size of the PIP window. / / If you select in Size, Position will not be activated. **4) Position**: Change the Position of the PIP window. / / /	PIP Source Size Position P
Edit Name	Name the input device connected to the input jacks to make your input SOURCE selection easier. **1) PC** **2) DVI** **3) Ext.** **4) AV** **5) S-Video** **6) Component** **7) HDMI**	PTEASCH

Picture

PC / DVI Mode

Available Mode P : PC / DVI T : TV E : Ext. A : AV S : S-Video C : Component H : HDMI

The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
MagicBright™	MagicBright™ is a new feature providing the optimum viewing environment depending on the contents of the image you are watching. Currently four different modes are available: Text, Internet, Entertain and Custom. Each mode has its own pre-configured brightness value. You can easily	

	select one of four settings by simply pressing the MagicBright™ control button. **The direct button on the remote control is 'M/B' button.** **1) Entertain** : High Brightness For watching motion pictures such as a DVD or VCD. **2) Internet** : Medium Brightness For working with a mixture of images such as the text with graphics added. **3) Text** : Normal Brightness For documentations or works involving heavy text. **4) Custom** Although the values are carefully chosen by our engineers, the pre-configured values may not be comfortable to your eyes depending on your taste. If this is the case, adjust the Brightness and Contrast by using the OSD menu.	
Custom	You can use the on-screen menus to change the contrast and brightness according to personal preference. **1) Contrast** : Adjusts the Contrast. **2) Brightness** : Adjusts the Brightness.	
If you adjust the picture by using Custom function, MagicBright will turn to the Custom mode.		
Colour Tone	The tone of the colour can be changed. The individual colour DTVs are also user adjustable. **1) PC : Cool / Normal / Warm / Custom** **2) DVI : Cool / Normal / Warm**	
Colour Control	Adjusts the individual R, G, B Colour Controls. **1) Red** **2) Green** **3) Blue** **- Available in PC Mode Only**	
If you adjust picture by using Colour Control function, Colour Tone will turn to the Custom mode.		
Image Lock	Image Lock is used to fine-tune and get the best image by removing noise that creates unstable images with jitter and shimmer. If satisfactory results are not obtained using the Fine adjustment, use the Coarse adjustment and then use Fine again. **- Available in PC Mode Only** **1) Coarse** : Removes noise such as vertical stripes. Coarse adjustment may move the screen image area. You may relocate it to the center using the Horizontal Control menu. **2) Fine** : Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed). **3) Sharpness** **- When the SOURCE is set to DVI, only this function operates.** : Adjusts the picture sharpness. **4) Position** : Adjusts the screen location horizontally and vertically.	**1) Coarse** **2) Fine** **3) Sharpness** **4) Position**
Auto Adjustment	The values of Fine, Coarse, Position are adjusted automatically. By changing the resolution in the control panel, auto function is performed. **The direct button on the remote control is the 'AUTO' button.** **- Available in PC Mode Only**	
Size	You can switch the Size. **1) Wide** **2) 4:3**	
PIP Picture	You can adjust the PIP Screen Settings. **- Available in PC / DVI Mode Only**	

	1) Contrast : Adjusts the Contrast of the PIP window on the screen. **2) Brightness** : Adjusts the Brightness of the PIP window on the screen. **3) Sharpness** : Adjusts the Sharpness of the PIP window on the screen. **4) Colour** : Adjusts the Colour of the PIP window on the screen **5) Tint** : Adds a natural tone to the PIP window. The Tint is connected by switching to NTSC from PAL broadcasting and is displayed on the menu while watching. But it is not displayed when watching a general PAL broadcast. For more information, see Broadcasting system by Country. **Available : PIP ON**	

TV / Ext. / AV / S-Video / Component / HDMI Mode

Available Mode P : PC / DVI T : TV E : Ext. A : AV S : S-Video C : Component H : HDMI

The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Mode	The Monitor has four automatic picture settings ("Dynamic", "Standard", "Movie", and "Custom") that are preset at the factory. You can activate either Dynamic, Standard, Movie, or Custom. You can select "Custom" which automatically recalls your personalized picture settings. **The direct button on the remote control is the 'P.MODE' button.** **1) Dynamic** **2) Standard** **3) Movie** **4) Custom**	
Custom	You can use the on-screen menus to change the contrast and brightness according to personal preference. **1) Contrast** : Adjusts the contrast. **2) Brightness** : Adjusts the brightness. **3) Sharpness** : Adjusts the picture sharpness. **4) Colour** : Adjusts the picture colour.	

	5) Tint : Adds a natural tone to the display. The Tint is connected by switching to NTSC from PAL broadcasting and is displayed on the menu while watching. But it is not displayed when watching a general PAL broadcast. For more information, see Broadcasting system by Country.	
Colour Tone	The tone of the colour can be changed. The individual colour components are also user adjustable. **1) Cool2** **2) Cool1** **3) Normal** **4) Warm1** **5) Warm2**	
Size	You can switch the Size. **The direct button on the remote control is 'P.SIZE' button.** • **TV / Ext. / AV / S-Video mode : Auto Wide / Wide / 16:9 / Zoom1 / Zoom2 / 4:3** • **Component / HDMI mode : Wide / 16:9 / Zoom1 / Zoom2 / 4:3**	

Sound

Available Mode P : PC / DVI T : TV E : Ext. A : AV S : S-Video C : Component H : HDMI

The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Mode	The Monitor has a built-in high fidelity stereo amplifier. **The direct button on the remote control is 'S.MODE' button.** **1) Standard** : Choose Standard for the standard factory settings. **2) Music** : Choose Music when watching music videos or concerts. **3) Movie** : Choose Movie when viewing movies. **4) Speech** : Choose Speech when watching a show that is mostly dialogue (i.e.,	

	news). **5) Custom** : Choose Custom if you want to adjust the settings according to personal preference.	
Custom	The sound settings can be adjusted to suit your personal preference. **1) Bass** : Emphasize low frequency audio. **2) Treble** : Emphasize high frequency audio. **3) Balance** : Allows you to adjust the sound balance between the left and right speakers. **You can hear the sound even when the sound value is set to 0.**	
Auto Volume	Reduces the differences in volume level among broadcasters. **Off** **On**	
Sound Select	You can select either Main or Sub when PIP is On. **1) Main** **2) Sub** **Available : PIP ON**	

Channel

Available Mode P : PC / DVI T : TV E : Ext. A : AV S : S-Video C : Component H : HDMI

The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Country	Select the country in which the product is being used before you use the Auto Store feature. If you do not see your country in the list, select Others. **1) Belgium** **7) Sweden** **2) France** **8) Switzerland** **3) Germany** **9) United Kingdom** **4) Italy** **10) Others** **5) Netherlands** **11) CIS** **6) Spain** **12) E. Europe**	

Auto Store	You can scan the frequency ranges available on your television in your area and store all the channels found automatically.	
Manual Store	You can scan the frequency ranges available on your television in your area and store all the channels found manually. **1) Programme** : Inputting the appropriate program number on the screen. **2) Colour System**: Adjusts repeatedly until the colour is of the best quality. (Auto <-> PAL <-> SECAM <-> NTSC4.43) **3) Sound System**: Adjusts repeatedly until the sound is of the best quality. (BG <-> DK <-> I <-> L) **4) Channel** : Choosing the air channel through the adjustment of up/down under the current frequency. **5) Search**: The tuner scans the frequency range until the first channel or the channel that you selected is received on your screen. **6) Store** : It's used to restore the number user inputs.	
Channel Manager	**1) Channel List** : You can add or delete a channel so only channels you want are displayed. "🔒" is active when "Child Lock" is selected to "On". **2) Child Lock** : Protects children from viewing inappropriate programs by blocking certain broadcast or video programs. The Child Lock feature can be selected only from the remote.	
Sort	It's used to exchange the numbers of two channels.	
Name	If channel name information is broadcast when you store the channels either manually or automatically, the names are assigned to the channels directly. You can however change these names or assign new names as required.	
Fine Tune	Due to weak signals or an incorrect antenna configuration, some of the channels may not be tuned correctly.	

Setup

Available Mode P : PC / DVI T : TV E : Ext. A : AV S : S-Video C : Component H : HDMI

The default setting may be different depending on the selected Input Mode (input signal SOURCE selected in External Input List) and the selected resolution.

OSD	Description	Play / Stop
Language	You can choose one of 8 languages. English Deutsch Français Español Italiano Svenska Português Русский **Note :** The language chosen affects only the language of the OSD. It has no effect on any software running on the computer.	
Sleep Timer	Turns the monitor off after a pre-determined period of time. **1) Off 2) 30 3) 60 4) 90 5) 120 6) 150 7) 180** **The direct button on the remote control is the 'SLEEP' button.**	
Transparency	Changes the opaqueness of the background of the OSD. **1) High** **2) Medium** **3) Low** **4) Opaque**	
Blue Screen	If no signal is being received or the signal is very weak, a blue screen automatically replaces the noisy picture background. If you wish to continue viewing the poor picture, you must set the "Blue screen" mode to "Off". **Off** **On**	
Reset	Picture parameters are replaced with the factory default values. **1) Image Reset** **2) Colour Reset**	
HDMI Black Level	When a DVD or set-top box is connected to your TV via HDMI, it may cause a degradation in the screen quality, such as an increase in the black level, a low contrast, or discoloration, etc., depending on the external device connected. In this case, adjust the screen quality of your TV by configuring the HDMI black level. **Normal** **Low**	

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Safety Instructions
Introduction
Setup
Adjusting Your Monitor
Troubleshooting
Specifications
Information

Self-Test Feature Check

Check the following items yourself before calling for service. Contact the service center for problems that you cannot solve by yourself.

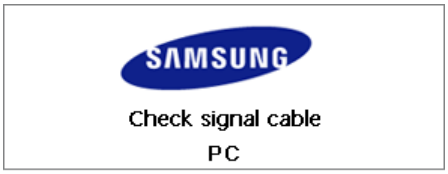
Self-Test Feature Check | Not Optimum Mode | Display Adapter Driver
Maintenance and Cleaning | Symptoms & Recommended Actions

1. Self-Test Feature Check

Your monitor provides a self test feature that allows you to check whether your monitor is functioning properly.

1. Turn off both your computer and the monitor.
2. Unplug the video cable from the back of the computer.
3. Turn on the monitor.

   The figure shown below ("Check Signal Cable") appears on a black background when the monitor is in its normal working condition though it does not sense any video signal: While in the Self-Test mode, the LED power indicator remains green and the figure moves around on the screen.

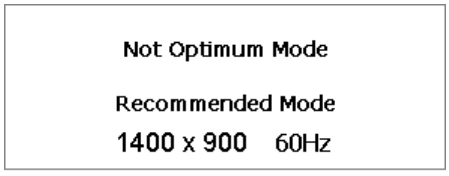


4. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after using the previous procedure, check your video controller and computer system; **your monitor is functioning properly**.

2. Not Optimum Mode

If the vertical resolution is not optimum mode, you can still see the display but the warning message below appears and disappears after one minute.
The user must adjust the frequency within that one minute.



Refer to Specifications > Preset Timing Modes for the resolutions or frequencies that are

supported by the monitor.

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3. Display Adapter Driver

Display adapter refers to the computer video card driver.
If the adapter is not properly set, you cannot adjust resolution, frequency or color and you cannot install the monitor driver.

1. Checking Adapter Driver
   Click Start → Settings → Control Panel → Display → Settings → Advanced → Adapter.
   If "Default" or a wrong product model is indicated, it means that the adapter driver is not properly installed. Install the adapter driver again according to the information provided by the computer or video card manufacturers.

2. Installing Adapter Driver

   The instructions given below are for general circumstances.
   For specific issues, contact the relevant computer or video card manufacturers.

   1) Click Start → Settings → Control Panel → Display → Settings → Advanced → Adapter → Update Driver → Next → Display a list of the known drivers for this device so that I can choose a specific driver → Next → Have Disk (Insert Video Card Driver diskette) → OK → Next → Next → Finish.
   2) In case you have Adapter Driver Setup file on your computer:
   Run Setup.exe or Install.exe, which is found in the Adapter Driver Setup file.

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4. Maintenance and Cleaning

1. Maintaining the Monitor Case.
   Clean with a soft cloth after disconnecting the power cord.

- Do not use benzene, thinner or other flammable substances, or a wet cloth.
- We recommend a Samsung cleansing agent is used to prevent damage to the screen.

2. Maintaining the Flat Panel Display Screen.
   Clean with a soft cloth (cotton flannel) smoothly.

- Never use acetone, benzene or thinner.
  (They may cause flaws or deformation of the screen surface.)
- The user will be required to pay costs and related expenses for repair of damages caused by him/her.

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5. Symptoms and Recommended Actions

A monitor recreates visual signals received from the computer. Therefore, if there is trouble with the computer or the video card, this can cause the monitor to become blank, have poor coloring, noise, Video mode not supported, etc. In this case, first check the SOURCE of the problem, and then contact a service center or your dealer.

1. Check if the power cord and the video cables are properly connected to the computer.
2. Check if the computer beeps more than 3 times when booting.
   (If it does, request an after-service for the main board of the computer.)
3. If you installed a new video card or if you assembled the PC, check if you installed the adapter(video) driver and the monitor driver.
4. Check if the scanning ratio of the video screen is set at 56 Hz ~ 75 Hz.
   (Do not exceed 60 Hz when using the maximum resolution.)
5. If you have problems in installing the adapter (video) driver, boot the computer in Safe Mode, remove the Display Adapter at the "**Control Panel**, **System**, **Device Administrator**" and then reboot the computer to reinstall the adapter (video) driver.

Check List

The following table lists possible problems and their solutions. Before calling for service, check

the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Installation | Screen | Audio | Remote Control

1. Problems related to Installation

Problems related to the monitor installation and their solutions are listed.

	Problems	Solutions
PC Mode	**It appears the PC does not function normally.**	• Check if the Display Adapter Driver (VGA Driver) is properly installed. (Refer to Installing Driver)
	The monitor screen flickers.	• Check if the signal cable between the computer and the monitor is securely connected and tightened. (Refer to Connecting the monitor)
TV Mode	**TV screen is blurred or shows noise signals.**	• Check if the TV antenna connector is securely connected to the external antenna. (Refer to Connecting TV)
	TV signal is not received	• Select "Auto Store" to configure the channel system automatically. (Refer to the Auto Store)

2. Problems related to Screen

Problems related to the monitor screen and their solutions are listed.

Problems	Solutions
Screen is blank and power indicator is off	• Ensure that the power cord is firmly connected and the LCD monitor is on. (Refer to the Connecting the Monitor)
"Check Signal Cable" message	• Ensure that the signal cable is firmly connected to the PC or video SOURCEs. (Refer to the Connecting the Monitor) • Ensure that the PC or video SOURCEs are turned on.
"Not Optimum Mode" message	• Check the maximum resolution and the frequency of the video adapter. • Compare these values with the data in the Preset Timing Modes Chart.
Picture rolls vertically.	• Check if the signal cable is securely connected. Connect it again securely. (Refer to Connecting the monitor)
Image is not clear. Picture is blurred.	• Run Frequency Coarse and Fine tuning. • Turn on again after removing all accessories (video extension cable, etc.) • Set resolution and frequency to the recommended ranges.
Picture image is unstable and vibrates.	• Check if the resolution and frequency set for the computer video card falls in the range supported by the monitor. If not, reset them referring to the current Information under the monitor menu and Preset Timing Modes.
Ghost images are shown in the picture.	
The image is too light or too dark	• Adjust the Brightness and Contrast. (Refer to the Brightness, Contrast)
Screen color is inconsistent.	• Adjust color using Custom under OSD Color Adjustment menu.
Color image is distorted with	

dark shadows.	
White color is poor.	
Power Indicator blinks green.	• The monitor is currently saving the changes made in settings to the OSD memory.
Screen is blank and power indicator light is steady green or blinks every 0.5 or 1 seconds	• The monitor is using its power management system. • press a key on the keyboard
The screen is blank and is blinking.	• If you see the "TEST GOOD" message on the screen when you press the MENU button, check the cable connection between the monitor and the computer to ensure that the connector is properly connected.

3. Problems related to Audio

Problems related to audio signals and their solutions are listed below.

Problems	Solutions
No sound	• Ensure that the audio cable is firmly connected to both the audio-in port on your monitor and the audio-out port on your sound card. (Refer to the Connecting the Monitor) • Check the volume level. (Refer to the Volume)
The sound level is too low.	• Check the volume level. (Refer to the Volume) • If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program.
Sound is too high pitched or too low pitched	• Adjust the Treble and Bass to appropriate level.

4. Problems related to Remote Control

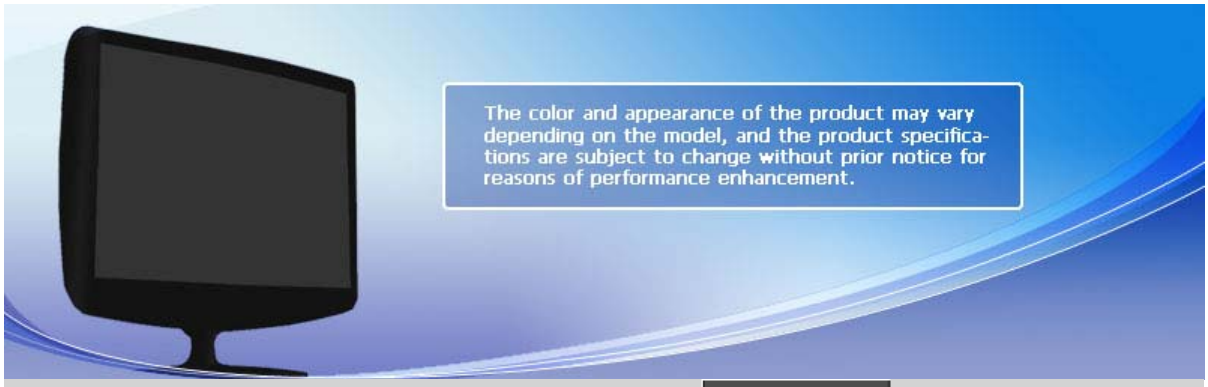
Problems related to the remote control and their solutions are listed.

Problems	Items to check
The remote control buttons do not respond.	• Check the battery polarities (+/-). • Check if the batteries have been exhausted. • Check if the power is on. • Check if the power cord is securely connected. • Check if a special fluorescent or neon lamp is on in the vicinity.

Q & A

Question	Answer
How can I change the frequency?	The frequency can be changed by reconfiguring the video card. Note that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)
How can I adjust the resolution?	• Windows XP : Set the resolution in the Control Panel→Appearance and Themes→Display→Settings. • Windows ME/2000 : Set the resolution in the Control Panel→Display→Settings.

	* Contact the video card manufacturer for details.
How can I set the Power Saving function?	• Windows XP : Set the resolution in the Control Panel→Appearance and Themes→Display→Screen Saver . Set the function in the BIOS-SETUP of the computer. (Refer to Windows/Computer Manual). • Windows ME/2000 : Set the resolution in the Control Panel→Display→Screen Saver. Set the function in the BIOS-SETUP of the computer. (Refer to Windows/Computer Manual).
How can I clean the outer case/LCD Panel?	Disconnect the power cord and then clean the monitor with a soft cloth, using either a cleaning solution or plain water. Do not leave any detergent or scratches on the case. Do not let any water enter the monitor.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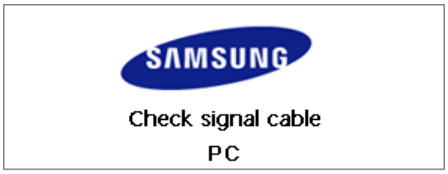

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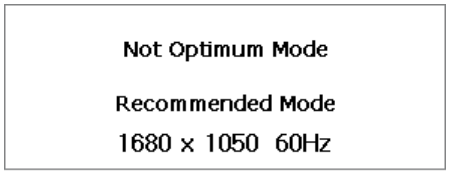

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	The monitor screen flickers.	• Check if the signal cable between the computer and the monitor is securely connected and tightened. (Refer to Connecting the monitor)
TV Mode	**TV screen is blurred or shows noise signals.**	• Check if the TV antenna connector is securely connected to the external antenna. (Refer to Connecting TV)
	TV signal is not received	• Select "Auto Store" to configure the channel system automatically. (Refer to the Auto Store)

2. Problems related to Screen

Problems related to the monitor screen and their solutions are listed.

Problems	Solutions
Screen is blank and power indicator is off	• Ensure that the power cord is firmly connected and the LCD monitor is on. (Refer to the Connecting the Monitor)
"Check Signal Cable" message	• Ensure that the signal cable is firmly connected to the PC or video SOURCEs. (Refer to the Connecting the Monitor) • Ensure that the PC or video SOURCEs are turned on.
"Not Optimum Mode" message	• Check the maximum resolution and the frequency of the video adapter. • Compare these values with the data in the Preset Timing Modes Chart.
Picture rolls vertically.	• Check if the signal cable is securely connected. Connect it again securely. (Refer to Connecting the monitor)
Image is not clear. Picture is blurred.	• Run Frequency Coarse and Fine tuning. • Turn on again after removing all accessories (video extension cable, etc.) • Set resolution and frequency to the recommended ranges.
Picture image is unstable and vibrates.	• Check if the resolution and frequency set for the computer video card falls in the range supported by the monitor. If not, reset them referring to the current Information under the monitor menu and Preset Timing Modes.
Ghost images are shown in the picture.	
The image is too light or too dark	• Adjust the Brightness and Contrast. (Refer to the Brightness, Contrast)
Screen color is inconsistent.	• Adjust color using Custom under OSD Color Adjustment menu.
Color image is distorted with	

dark shadows.	
White color is poor.	
Power Indicator blinks green.	• The monitor is currently saving the changes made in settings to the OSD memory.
Screen is blank and power indicator light is steady green or blinks every 0.5 or 1 seconds	• The monitor is using its power management system. • press a key on the keyboard
The screen is blank and is blinking.	• If you see the "TEST GOOD" message on the screen when you press the MENU button, check the cable connection between the monitor and the computer to ensure that the connector is properly connected.

3. Problems related to Audio

Problems related to audio signals and their solutions are listed below.

Problems	Solutions
No sound	• Ensure that the audio cable is firmly connected to both the audio-in port on your monitor and the audio-out port on your sound card. (Refer to the Connecting the Monitor) • Check the volume level. (Refer to the Volume)
The sound level is too low.	• Check the volume level. (Refer to the Volume) • If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program.
Sound is too high pitched or too low pitched	• Adjust the Treble and Bass to appropriate level.

4. Problems related to Remote Control

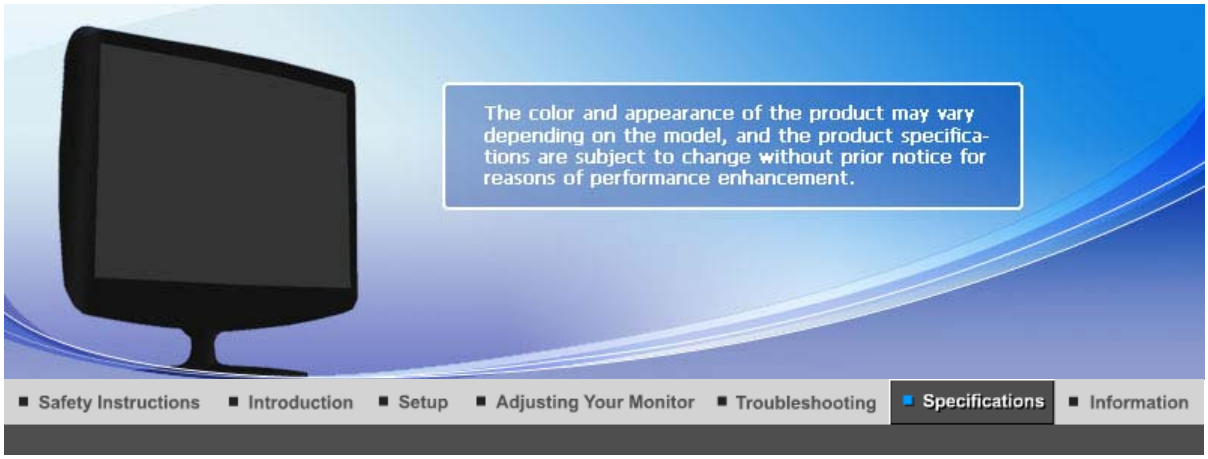
Problems related to the remote control and their solutions are listed.

Problems	Items to check
The remote control buttons do not respond.	• Check the battery polarities (+/-). • Check if the batteries have been exhausted. • Check if the power is on. • Check if the power cord is securely connected. • Check if a special fluorescent or neon lamp is on in the vicinity.

Q & A

Question	Answer
How can I change the frequency?	The frequency can be changed by reconfiguring the video card. Note that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)
How can I adjust the resolution?	• Windows XP : Set the resolution in the Control Panel→Appearance and Themes→Display→Settings. • Windows ME/2000 : Set the resolution in the Control Panel→Display→Settings.

	* Contact the video card manufacturer for details.
How can I set the Power Saving function?	• Windows XP : Set the resolution in the Control Panel→Appearance and Themes→Display→Screen Saver . Set the function in the BIOS-SETUP of the computer. (Refer to Windows/Computer Manual). • Windows ME/2000 : Set the resolution in the Control Panel→Display→Screen Saver. Set the function in the BIOS-SETUP of the computer. (Refer to Windows/Computer Manual).
How can I clean the outer case/LCD Panel?	Disconnect the power cord and then clean the monitor with a soft cloth, using either a cleaning solution or plain water. Do not leave any detergent or scratches on the case. Do not let any water enter the monitor.


The color and appearance of the product may vary depending on the model, and the product specifications are subject to change without prior notice for reasons of performance enhancement.
Safety Instructions
Introduction
Setup
Adjusting Your Monitor
Troubleshooting
Specifications
Information

General

General	
Model Name	SyncMaster 932MW
LCD Panel	
Size	19" Wide diagonal (48 cm)
Display area	408.24 mm(H) x 255.15 mm(V)
Pixel Pitch	0.2835 mm(H) x 0.2835 mm(V)
Synchronization	
Horizontal	30 ~ 81 kHz
Vertical	56 ~ 75 Hz
Display Color	
16.7 M	
Resolution	
Optimum resolution	1440 x 900 @ 60 Hz
Maximum resolution	1440 x 900 @ 60 Hz
Input Signal, Terminated	
RGB Analog TTL level (V high ≥ 2.0V, V low ≤ 0.8V) 0.7 Vp-p ± 5 %	
Maximum Pixel Clock	
108.00 MHz	
Power Supply	
AC 100 - 240 VAC (+/- 10 %), 60 / 50 Hz ± 3 Hz	
Signal Cable	
15pin to 15pin D-sub cable, Detachable DVI-D to DVI-D connector, Detachable(Sold separately)	
Signal connectors	
15pin 3-row D-sub connector, 24pin 3-row DVI-D connector 19pin Type A HDMI Conntector, Composite, S-Video, Component, Scart, RF	
Dimensions (WxHxD)/ Weight	

466.0 X 400.0 X 190.0 mm / 18.3 X 15.7 X 7.5 inch / 4.65 kg / 10.2 lbs (With Stand)
466.0 X 350.0 X 70.0 mm / 18.3 X 13.8 X 2.8 inch (Without Stand)

Environmental considerations

Operating	Temperature: 50°F ~ 104°F(10°C ~ 40°C) Humidity: 10 % to 80 %, Non-condensing
Storage	Temperature: -4 °F ~113 °F(-20 °C ~ 45 °C) Humidity: 5 % to 95 %, Non-condensing

Plug and Play Capability

This monitor can be installed on any Plug & Play compatible system. The interaction of the monitor and the computer systems will provide the best operating conditions and monitor settings. In most cases, the monitor installation will proceed automatically, unless the user wishes to select alternate settings.

Dot Acceptable

TFT LCD panel manufactured by using advanced semiconductor technology with precision of 1ppm(one millionth) above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without uneasiness.

- For example, the number of TFT LCD sub pixels contained in this product are 3,888,000.

Note: Design and specifications are subject to change without prior notice.

Class B Equipment (Information Communication equipment for residential use)

This product complies with the Electromagnetic Compatibility Directives for residential use and can be used in all areas including common residential areas.
(Class B equipment emits less electromagnetic waves than Class A equipment.)

PowerSaver

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The monitor automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPMS compliant video card installed in your computer. Use the software utility installed on your computer to set up this feature.

State	Normal Operation	Power saving mode	Power off
Power Indicator	Blue	Blue, Blinking	Black
Power Consumption	Less than 45 W	Less than 2 W	Less than 2 W

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjust the screen as follows.

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+

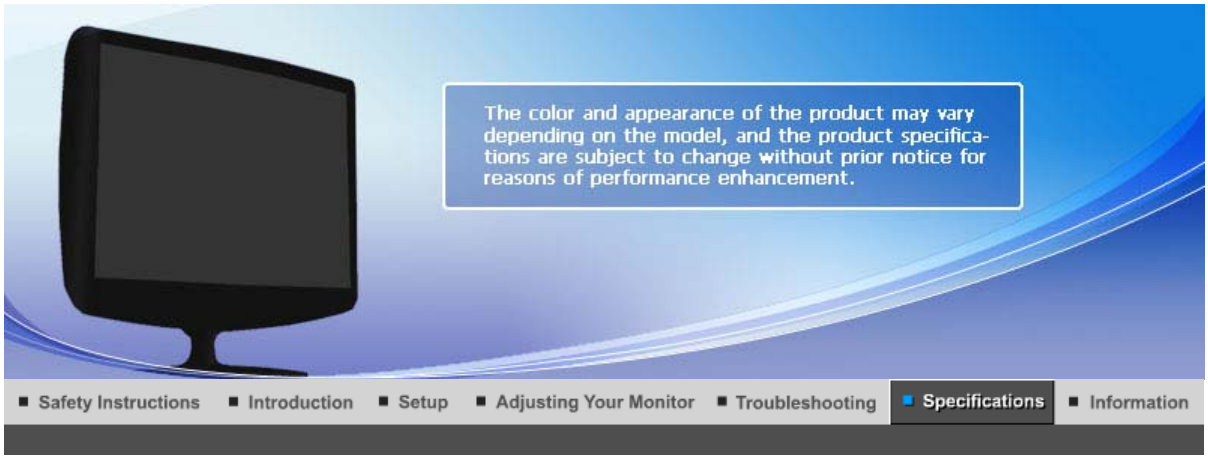
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC,1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 960	60.000	60.000	108.000	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1440 x 900	55.935	59.887	106.500	-/+

Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle and the inverse number of the Horizontal Cycle is called the Horizontal Frequency. Unit: kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the user. The frequency of this repetition is called the Vertical Frequency or Refresh Rate. Unit: Hz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Setup
Adjusting Your Monitor
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Information

General

General	
Model Name	SyncMaster 2032MW
LCD Panel	
Size	20" Wide diagonal (51 cm)
Display area	433.44 mm(H) x 270.9 mm(V)
Pixel Pitch	0.258 mm(H) x 0.258 mm(V)
Synchronization	
Horizontal	30 ~ 81 kHz
Vertical	56 ~ 75 Hz
Display Color	
16.7 M	
Resolution	
Optimum resolution	1680 x 1050 @ 60 Hz
Maximum resolution	1680 x 1050 @ 60 Hz
Input Signal, Terminated	
RGB Analog TTL level (V high ≥ 2.0V, V low ≤ 0.8V) 0.7 Vp-p ± 5%	
Maximum Pixel Clock	
146.250 MHz	
Power Supply	
AC 100 - 240 VAC (+/- 10 %), 60 / 50 Hz ± 3 Hz	
Signal Cable	
15pin to 15pin D-sub cable, Detachable DVI-D to DVI-D connector, Detachable(Sold separately)	
Signal connectors	
15pin 3-row D-sub connector, 24pin 3-row DVI-D connector 19pin Type A HDMI Conntector, Composite, S-Video, Component, Scart, RF	
Dimensions (WxHxD)/ Weight	

493.0 X 419.0 X 209.0 mm / 19.4 X 16.5 X 8.2 inch / 5.3 kg / 11.7 lbs (With Stand)
493.0 X 368.0 X 70.0 mm / 19.4 X 14.5 X 2.8 inch (Without Stand)

Environmental considerations

Operating	Temperature: 50°F ~ 104°F(10°C ~ 40°C) Humidity: 10 % to 80 %, Non-condensing
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VESA, 1280 x 960	60.000	60.000	108.000	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1680 x 1050	64.674	59.883	119.000	+/-

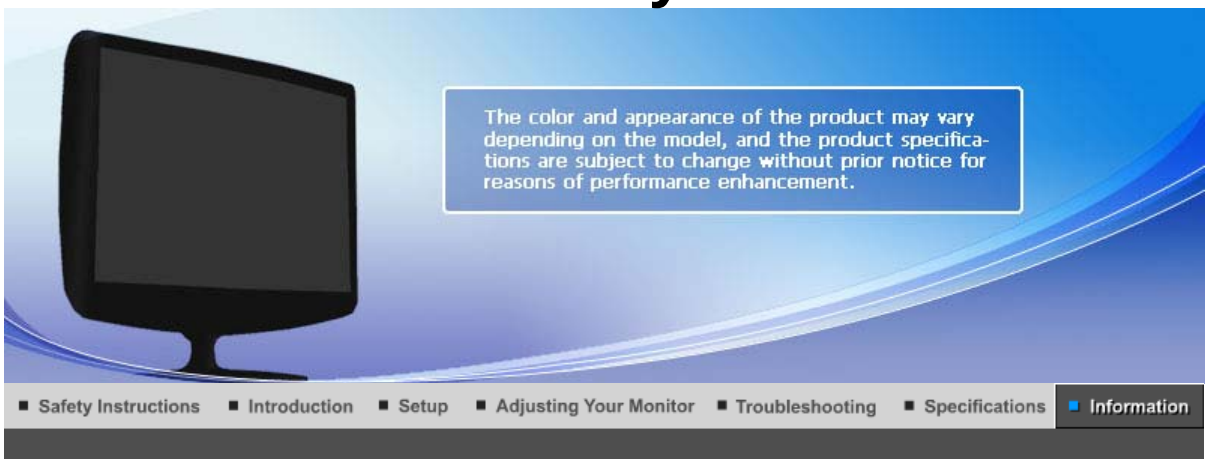
Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle and the inverse number of the Horizontal Cycle is called the Horizontal Frequency. Unit: kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the user. The frequency of this repetition is called the Vertical Frequency or Refresh Rate. Unit: Hz

SyncMaster 932MW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Safety Instructions
Introduction
Setup
Adjusting Your Monitor
Troubleshooting
Specifications
Information

Contact SAMSUNG WORLDWIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

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	Distributor pro Českou republiku: Samsung Zrt., česka organizační složka Vyskočilova 4, 14000 Praha 4	
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THAILAND	1800-29-3232, 02-689-3232	http://www.samsung.com/th

TAIWAN	0800-329-999	http://www.samsung.com/tw
VIETNAM	1 800 588 889	http://www.samsung.com/vn

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Terms

Sync Signal

Sync (Synchronized) Signals refer to the standard signals that are required to display desired colors on the monitor. They are divided into Vertical and Horizontal Sync Signals. These signals display normal color images by the set resolution and frequency.

Types of Sync Signals

Separate	This is a scheme of transmitting individual vertical and horizontal sync signals to the monitor.
Composite	This is a scheme of combining vertical and horizontal sync signals into one composite signal and transmitting it to the monitor. The monitor displays the color signals by separating the composite signal into original color signals.

Dot Pitch

The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

Vertical Frequency

The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called the Vertical Frequency or Refresh Rate. Unit: Hz

Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz.

Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

Interlace and Non-Interlace Methods

Showing the horizontal lines of the screen from the top to the bottom sequentially is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

Plug & Play

This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

Resolution

The number of horizontal and vertical dots used to compose the screen image is called the 'resolution'. This number shows the accuracy of the display. A high resolution is good for performing multiple tasks as more image information can be shown on the screen.

Example: If the resolution is 1680 x 1050, this means the screen is composed of 1680 horizontal dots (horizontal resolution) and 1050 vertical lines (vertical resolution).

RF Cable

A round signal cable generally used for TV antennas.

Satellite Broadcasting

Broadcasting service provided via satellite. Enables high picture quality and clear sound throughout the

country regardless of the location of the viewer.

Sound Balance
Balances the levels of the sound coming from each speaker in televisions with two speakers.

Cable TV
Whereas the terrestrial broadcasting is delivered via frequency signals through the air, cable broadcasting is transmitted via a cable network. In order to view cable TV, one must purchase a cable receiver and hook it up to the cable network.

CATV
"CATV" refers to the broadcasting service offered at hotels, schools and other buildings through their own broadcasting system, apart from VHF or UHF broadcasting by terrestrial broadcasters. The CATV programs may include movies, entertainment and educational programs. (Different from cable TV.)

CATV can be viewed only within the area in which the CATV service is offered.

S-Video
Short for "Super Video." S-Video allows up to 800 lines of horizontal resolution, enabling high-quality video.

VHF/UHF
VHF indicates TV channels 2 to 13, and UHF indicates channels 14 through 69.

Channel Fine Tuning
This feature allows the viewer to fine-tune the TV channel to obtain the best viewing conditions. The Samsung LCD TV has both automatic and manual channel fine-tuning features to enable the viewer to adjust their desired settings.

External Device Input
External device input refers to video input from such external video devices as VCRs, camcorders and DVD players, separate from a TV broadcast.

DVD
A type of digital disk technology that takes up only the benefits of CD and LD, to implement a high resolution/quality, which enables the user to enjoy clearer images.

DTV Broadcasting (Digital TV Broadcasting)
An enhanced broadcasting technology to process digital video signals using a set-top box, which implements a high resolution and clearer digital images on the screen.

LNA (Low Noise Amplifier)
This derives from artificial satellite technology that amplifies weak signals even in poor reception areas for sharper images.

Antenna Converter
A connection part that is used to link a Wide antenna cable (feeder cable) to the TV.

English Caption (= Caption Setting)
A kind of language selection feature that provides English subtitles (caption) or character information services from broadcasting services (ex: AFKN) or video tapes (marked CC), and which are especially useful for studying English.

Multiplex Broadcasting
This enables the user to enjoy the broadcasting service in both Korean and foreign (original) language as well as in stereo mode.

A2
This system uses two carriers to transmit voice data. Countries such as South Korea and Germany use this system.

BTSC
Broadcast Television System Committee
The stereo broadcasting system that is used in most of the countries that have adopted the NTSC system, including the United States, Canada, Chile, Venezuela and Taiwan. It also refers to the

organization that has been organized to promote its development and management.

EIAJ
Electronic Industries Association of Japan.

For Better Display

1. Adjust the computer resolution and screen inection rate (refresh rate) on the computer as described below to enjoy the best picture quality. You can have an uneven picture quality on screen if the best picture quality is not provided for TFT-LCD.
    - Resolution: 1680 x 1050
    - Vertical frequency (refresh rate): 60 Hz
2. TFT LCD panels manufactured by using advanced semiconductor technology with a precision of 1ppm (one millionth) and above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without any problems.
    - For example, the number of TFT LCD sub pixels contained in this product are 5,292,000.
3. When cleaning the monitor and the panel outside, please apply the recommended small amount of cleaner by using a soft cloth to polish. Do not force the LCD area but rub softly.
   If excessive force is applied, you may stain it.
4. If you are not satisfied with the quality of picture, you can get better quality of picture by executing "auto adjustment function" in display screen that is appeared as window termination button is pressed.
   If there's still noise after the automatic adjustment, use the FINE/COARSE adjustment function.
5. When viewing a fixed screen for an extended period of time, residual image or blurriness may appear. Change the mode to energy saving mode or set a screensaver to a changing picture when away from the monitor for an extended period of time.
6. Do not display a still image(such as on a video game or when hooking up a DVD to this LCD_TV) on the Color TFT-LCD (Thin Film Transister Liquid Crystal Display) panel for a long time as it can cause screen image retention. This image retention is also known as "screen burn". To avoid such image retention, reduce the degree of brightness and contrast of this screen when displaying a still image.

Authority

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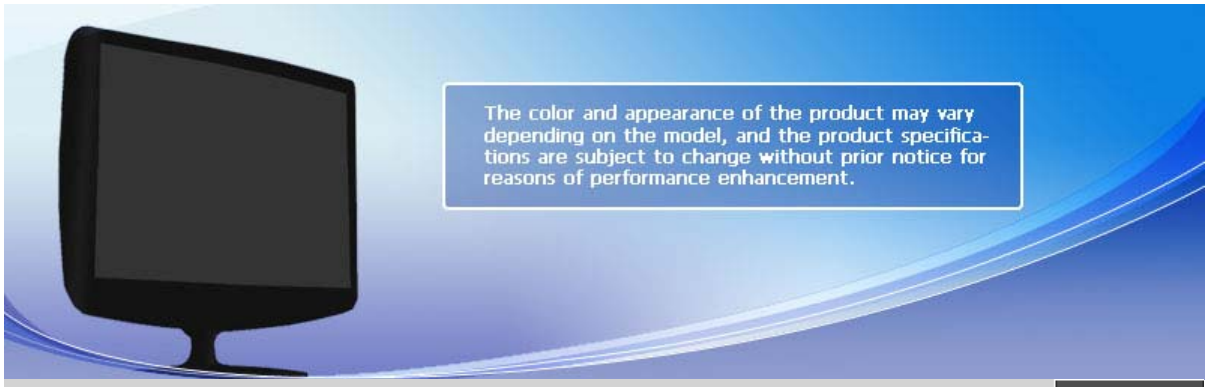
SyncMaster 2032MW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Terms

Sync Signal

Sync (Synchronized) Signals refer to the standard signals that are required to display desired colors on the monitor. They are divided into Vertical and Horizontal Sync Signals. These signals display normal color images by the set resolution and frequency.

Types of Sync Signals

Separate	This is a scheme of transmitting individual vertical and horizontal sync signals to the monitor.
Composite	This is a scheme of combining vertical and horizontal sync signals into one composite signal and transmitting it to the monitor. The monitor displays the color signals by separating the composite signal into original color signals.

Dot Pitch

The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

Vertical Frequency

The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called the Vertical Frequency or Refresh Rate. Unit: Hz

Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz.

Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

Interlace and Non-Interlace Methods

Showing the horizontal lines of the screen from the top to the bottom sequentially is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

Plug & Play

This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

Resolution

The number of horizontal and vertical dots used to compose the screen image is called the 'resolution'. This number shows the accuracy of the display. A high resolution is good for performing multiple tasks as more image information can be shown on the screen.

Example: If the resolution is 1680 x 1050, this means the screen is composed of 1680 horizontal dots (horizontal resolution) and 1050 vertical lines (vertical resolution).

RF Cable

A round signal cable generally used for TV antennas.

Satellite Broadcasting

Broadcasting service provided via satellite. Enables high picture quality and clear sound throughout the

country regardless of the location of the viewer.

Sound Balance
Balances the levels of the sound coming from each speaker in televisions with two speakers.

Cable TV
Whereas the terrestrial broadcasting is delivered via frequency signals through the air, cable broadcasting is transmitted via a cable network. In order to view cable TV, one must purchase a cable receiver and hook it up to the cable network.

CATV
"CATV" refers to the broadcasting service offered at hotels, schools and other buildings through their own broadcasting system, apart from VHF or UHF broadcasting by terrestrial broadcasters. The CATV programs may include movies, entertainment and educational programs. (Different from cable TV.)

CATV can be viewed only within the area in which the CATV service is offered.

S-Video
Short for "Super Video." S-Video allows up to 800 lines of horizontal resolution, enabling high-quality video.

VHF/UHF
VHF indicates TV channels 2 to 13, and UHF indicates channels 14 through 69.

Channel Fine Tuning
This feature allows the viewer to fine-tune the TV channel to obtain the best viewing conditions. The Samsung LCD TV has both automatic and manual channel fine-tuning features to enable the viewer to adjust their desired settings.

External Device Input
External device input refers to video input from such external video devices as VCRs, camcorders and DVD players, separate from a TV broadcast.

DVD
A type of digital disk technology that takes up only the benefits of CD and LD, to implement a high resolution/quality, which enables the user to enjoy clearer images.

DTV Broadcasting (Digital TV Broadcasting)
An enhanced broadcasting technology to process digital video signals using a set-top box, which implements a high resolution and clearer digital images on the screen.

LNA (Low Noise Amplifier)
This derives from artificial satellite technology that amplifies weak signals even in poor reception areas for sharper images.

Antenna Converter
A connection part that is used to link a Wide antenna cable (feeder cable) to the TV.

English Caption (= Caption Setting)
A kind of language selection feature that provides English subtitles (caption) or character information services from broadcasting services (ex: AFKN) or video tapes (marked CC), and which are especially useful for studying English.

Multiplex Broadcasting
This enables the user to enjoy the broadcasting service in both Korean and foreign (original) language as well as in stereo mode.

A2
This system uses two carriers to transmit voice data. Countries such as South Korea and Germany use this system.

BTSC
Broadcast Television System Committee
The stereo broadcasting system that is used in most of the countries that have adopted the NTSC system, including the United States, Canada, Chile, Venezuela and Taiwan. It also refers to the

organization that has been organized to promote its development and management.

EIAJ
Electronic Industries Association of Japan.

For Better Display

1. Adjust the computer resolution and screen inection rate (refresh rate) on the computer as described below to enjoy the best picture quality. You can have an uneven picture quality on screen if the best picture quality is not provided for TFT-LCD.
    - Resolution: 1680 x 1050
    - Vertical frequency (refresh rate): 60 Hz
2. TFT LCD panels manufactured by using advanced semiconductor technology with a precision of 1ppm (one millionth) and above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without any problems.
    - For example, the number of TFT LCD sub pixels contained in this product are 5,292,000.
3. When cleaning the monitor and the panel outside, please apply the recommended small amount of cleaner by using a soft cloth to polish. Do not force the LCD area but rub softly.
   If excessive force is applied, you may stain it.
4. If you are not satisfied with the quality of picture, you can get better quality of picture by executing "auto adjustment function" in display screen that is appeared as window termination button is pressed.
   If there's still noise after the automatic adjustment, use the FINE/COARSE adjustment function.
5. When viewing a fixed screen for an extended period of time, residual image or blurriness may appear. Change the mode to energy saving mode or set a screensaver to a changing picture when away from the monitor for an extended period of time.
6. Do not display a still image(such as on a video game or when hooking up a DVD to this LCD_TV) on the Color TFT-LCD (Thin Film Transister Liquid Crystal Display) panel for a long time as it can cause screen image retention. This image retention is also known as "screen burn". To avoid such image retention, reduce the degree of brightness and contrast of this screen when displaying a still image.

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PRODUCT INFORMATION (Image Retention Free)

LCD Monitors and TVs may have image retention when switching from one image to another especially after displaying a stationary image for a long time.
This guide is to demonstrate correct usage of LCD products in order to protect them from Image retention.

- **Warranty**
  Warranty does not cover any damage caused by image retention.
  Burn-in is not covered by the warranty.

- **What is Image retention ?**
  During normal operation of a LCD panel, pixel image retention doesn't occur. However, if the same image is displayed for a long time, a slight difference in electric charge accumulates between the two electrodes which encase the liquid crystal. This may cause the liquid crystal to build up in a certain areas of the display. Thus, the previous image is retained when switching to a new video image. All display products, including LCD,are subject to image retention. This is not a product defect.

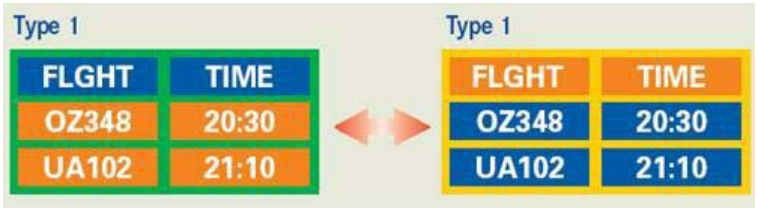
  Please follow the suggestions below to protect your LCD from image retention

- **Power Off, Screen Saver, or Power Save Mode**
  Ex)
  - Turn the power off when using a stationary pattern.
    - Turn the power off for 4 hours after 20 hours in use
    - Turn the power off for 2 hours after 12 hours in use
  - Use a Screen saver if possible
    - Screen saver in one color or a moving image is recommended.
  - Set the Monitor to power off with the PC Display Properties Power Scheme.

- **Suggestions for specific applications**
  Ex) Airports, Transit Stations, Stock Markets, Banks, and Controlling Systems
  We recommend that you follow set up of your display system program as below:

- **Display Information together with Logo or Moving image cycle.**
  Ex) Cycle : Display Information for 1 hour followed by a
  Display Logo or moving image for 1 minute.

- **Change the Color Information periodically (Use 2 different colors).**
  Ex) Rotate the Color Information with 2 colors every 30 minutes.



Avoid using a combination of characters and background color with large difference in luminance.
Avoid using Grey colors, which can cause Image retention easily.

- Avoid: Colors with big difference in luminance (Black & White, Grey)

Ex)

- Recommended settings: Bright colors with little difference in luminance

- Change the characters color and background color every 30 minutes

Ex)

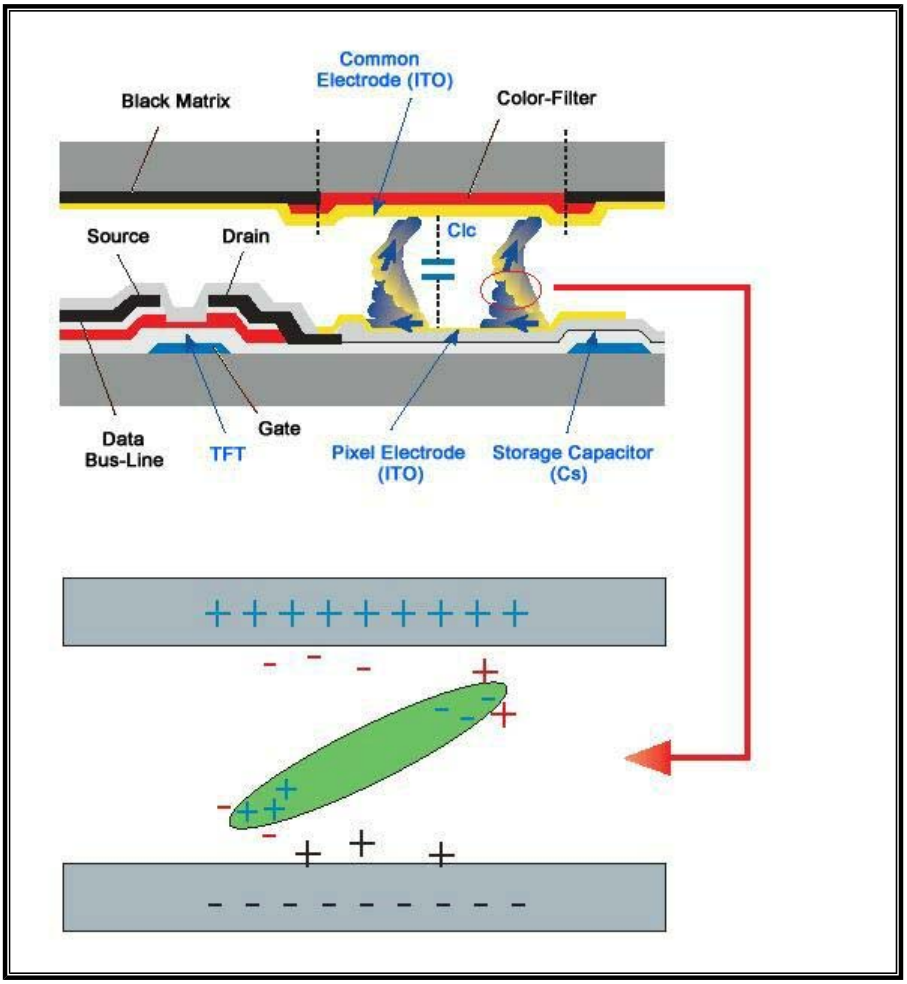
- Every 30 minutes, change the characters with movement.

Ex)

- **The best way to protect your monitor from Image retention is to set your PC or System to operate a Screen Saver program when you are not using it.**

  Image retention may not occur when a LCD panel is operated under normal conditions.

  Normal conditions are defined as continuously changing video patterns. When the LCD panel is operated for a long time with a fixed pattern (-over 12 hours-), there may be slight difference in voltage between electrodes that work the liquid crystal (LC) in a pixel. The voltage difference between electrodes increases with time, forcing the liquid crystal to lean. When this occurs, the previous image may be seen when the pattern is changed.
  To prevent this, the accumulated voltage difference must be decreased.



- Our LCD Monitor satisfies ISO13406-2 Pixel fault Class II

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment) - Europe only

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.